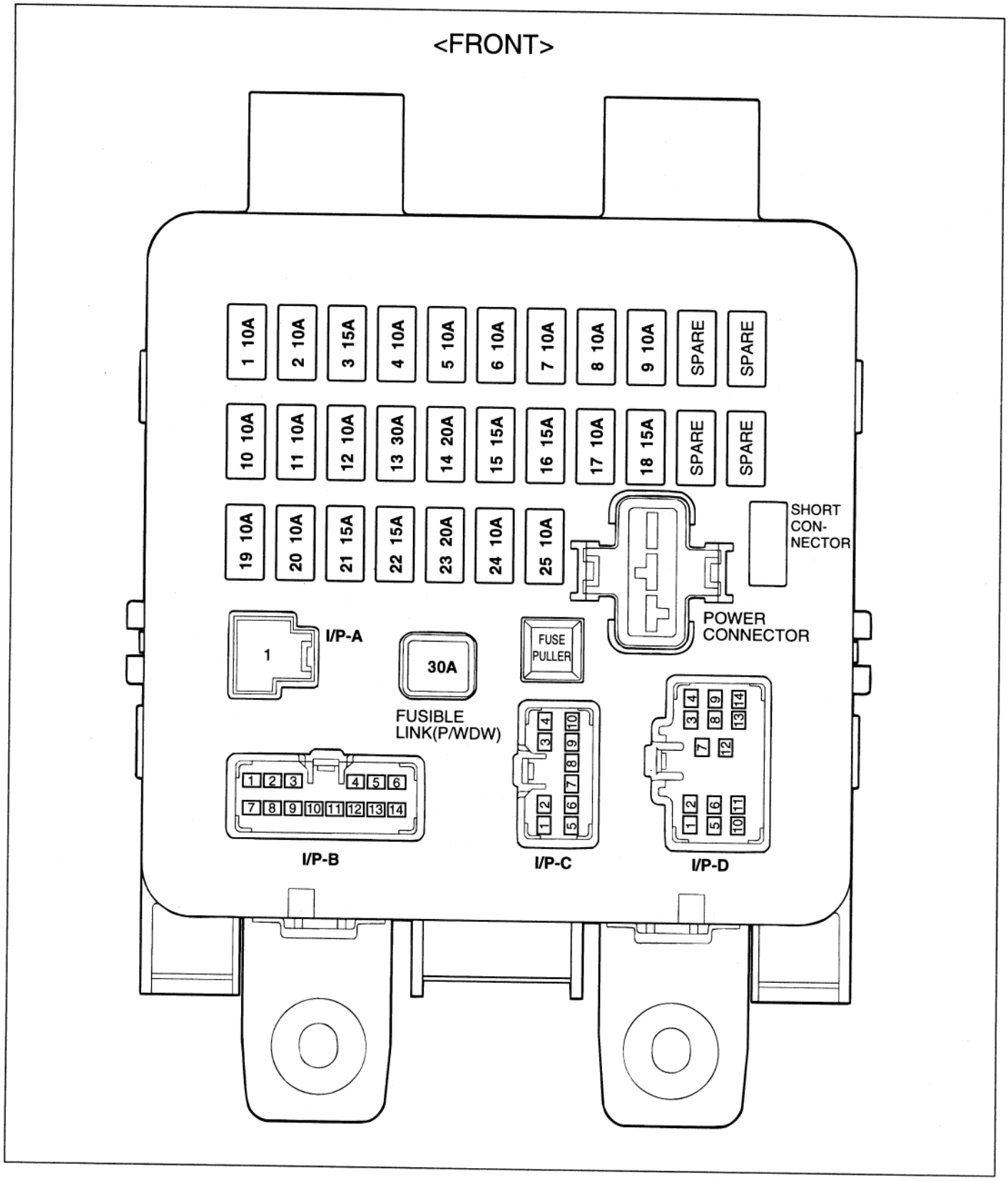

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FUSE AND RELAY INFORMATION E2KB0010

PASSENGER COMPARTMENT JUNCTION BLOCK

LAYOUT



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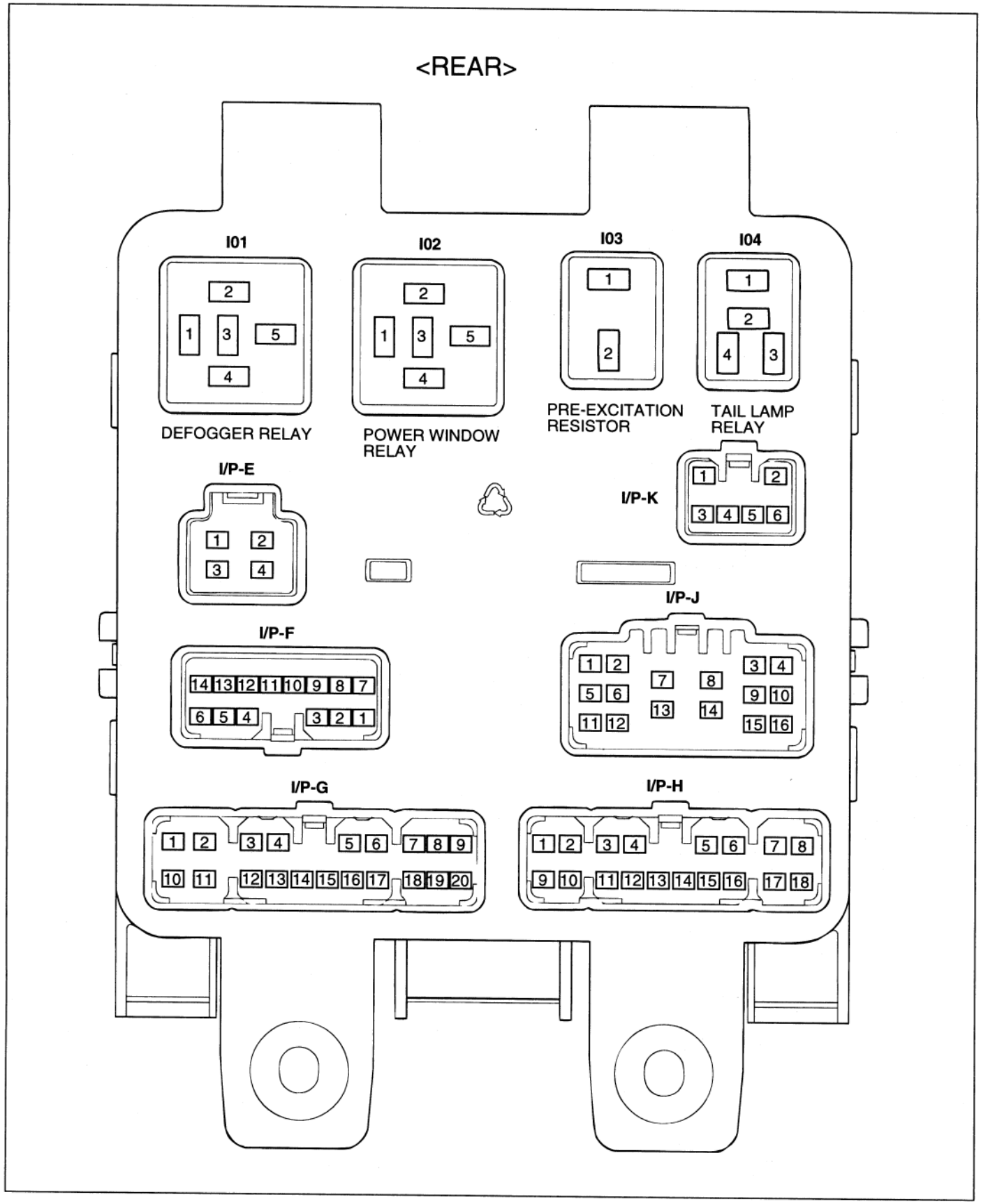
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CIRCUIT

Description	NO.	Amperages	Circuit Protected
FUSE	1	10A	Hazard switch, Transaxle range switch, Back-up lamp switch
	2	10A	Pre-excitation resistor, Instrument cluster, ETACM, TACM, DRL module, Generator
	3	15A	SRS control
	4	10A	Hazard relay, ECM, Siren
	5	10A	Blower relay, Blower motor
	6	10A	Short connector, Illumination lamps, Head lamp, Head lamp washer
	7	10A	Head lamp, Exterior lamps
	8	10A	B/Alarm relay, Transaxle range switch, Starting
	9	10A	Digital clock, Power outside mirror switch, Audio
	10	10A	Cruise control, ECM, TCM, Vehicle speed
	11	10A	ABS control
	12	10A	Instrument cluster
	13	30A	Defogger relay
	14	20A	Power antenna
	15	15A	Door lock control module, Left front door lock actuator, sunroof
	16	15A	Stop lamp switch, Power window relay
	17	10A	Rear window & outside mirror defogger
	18	15A	Cigarette lighter
	19	10A	Rear fog lamp relay
	20	10A	Stop lamp switch, Head lamp leveling, Head lamp, A/C relay, Head lamp washer relay
	21	15A	Rear wiper & washer
	22	15A	Front wiper & washer
	23	20A	Seat warmer
	24	10A	A/C control module, Blower relay, ETACM, TACM, Sunroof relay
	25	10A	Door lamps, Instrument cluster, Data link connector, Multipurpose check connector, Room lamps, ETACM, TACM, Audio, A/C control, Power connector
Fusible Link	P/WDW	30A	Power window relay

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LAYOUT

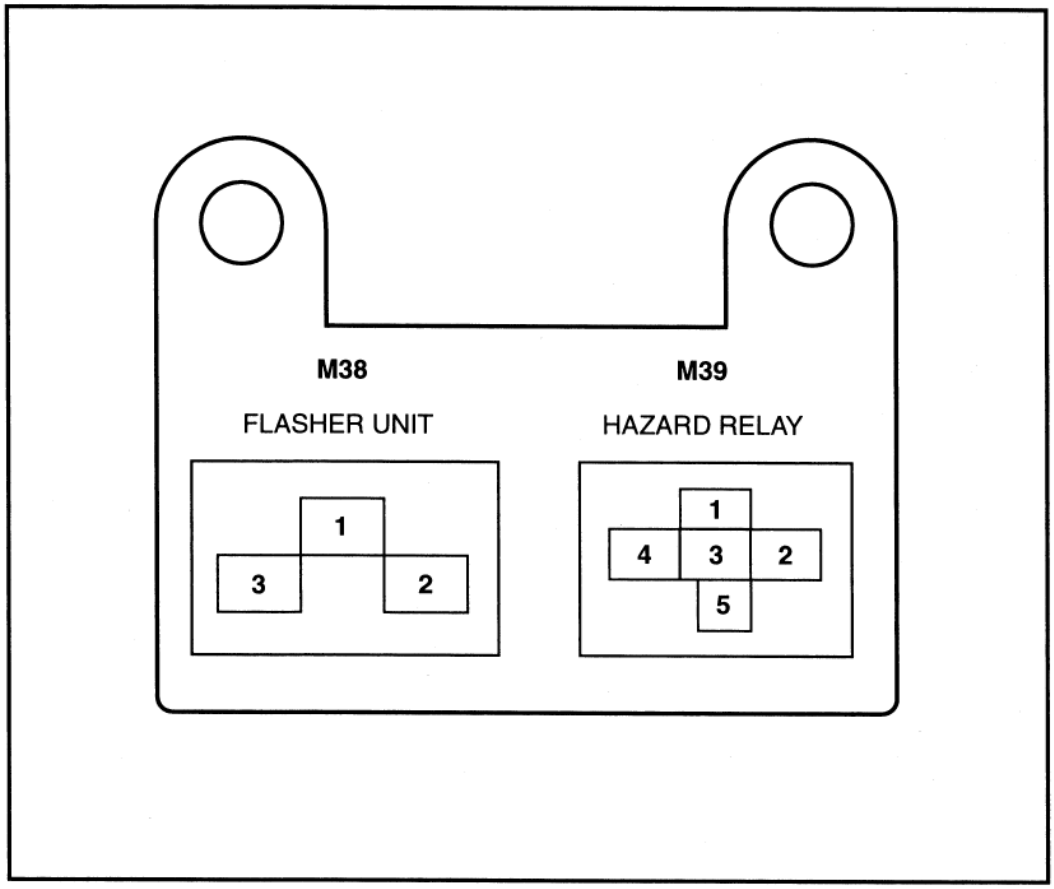


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PASSENGER COMPARTMENT RELAY BOX

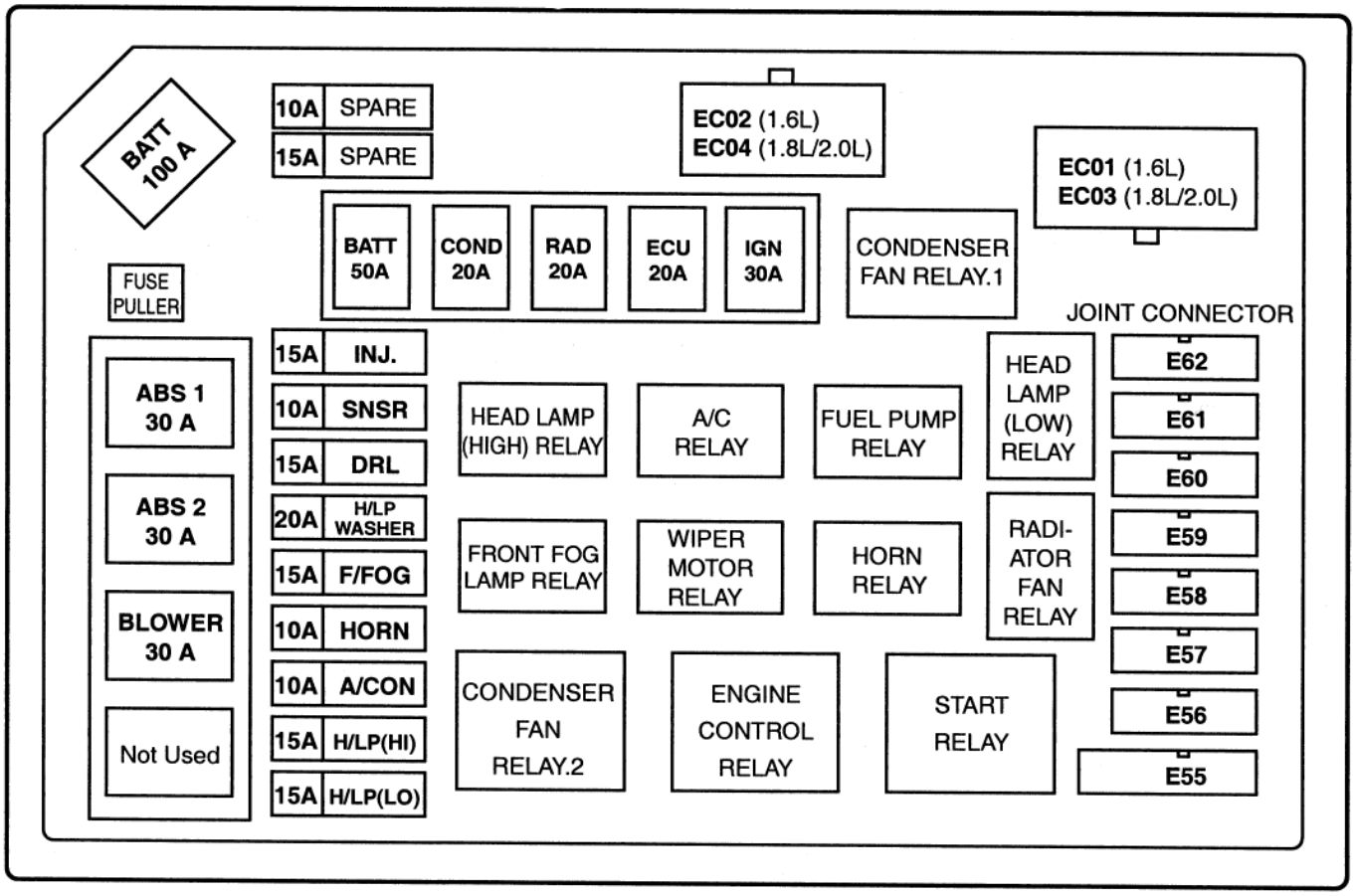
LAYOUT



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ENGINE COMPARTMENT RELAY AND FUSE BOX

LAYOUT



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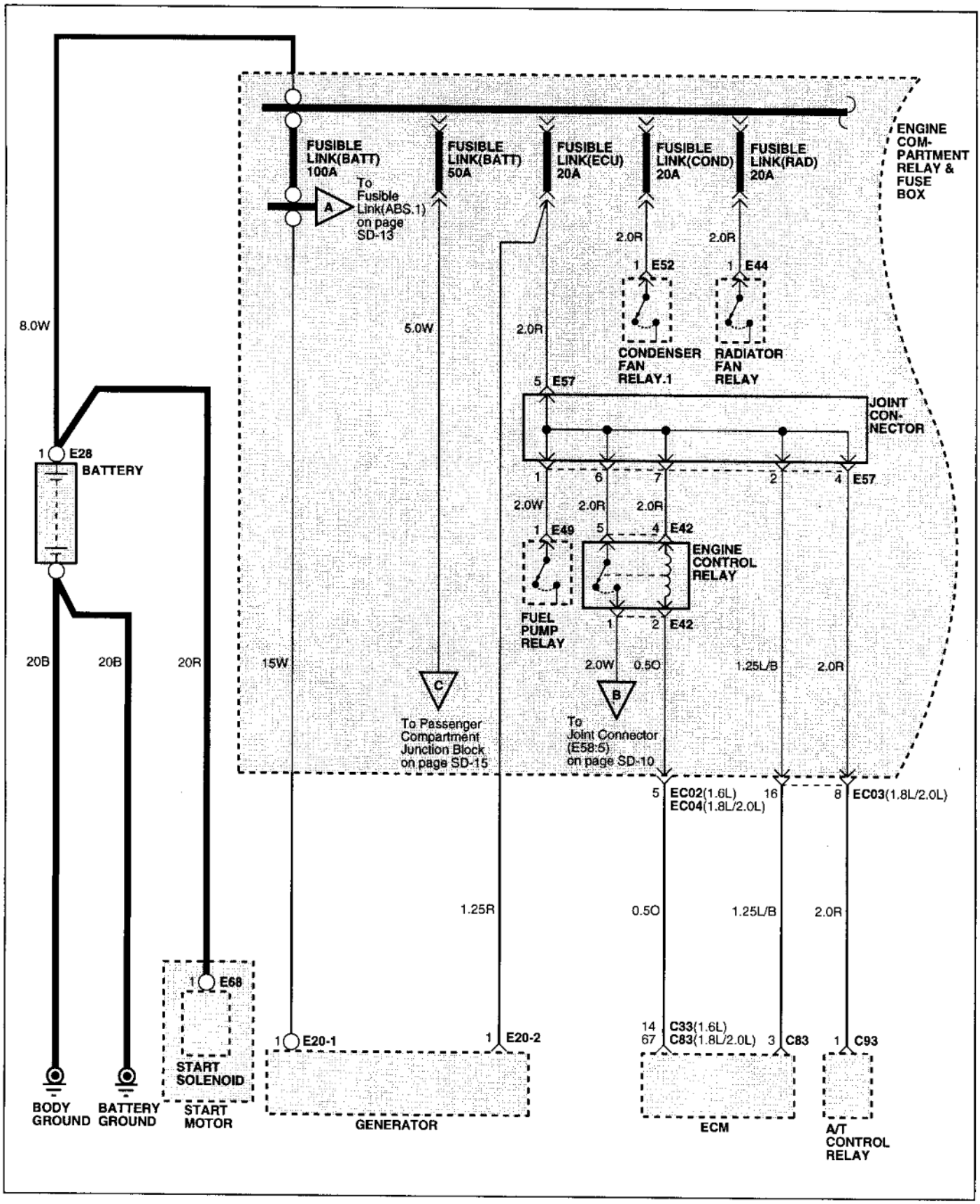
CIRCUIT

Description		Amperages	Circuit Protected
Fusible Link	BATT	100A	Generator
	BATT	50A	Fusible link(P/WDW), Tail lamp relay, Power connector, Fuse(4,13,14,15,16)
	COND	20A	Condenser fan relay.1
	RAD	20A	Radiator fan relay
	ECU	20A	Generator, Engine control relay, Fuel pump relay, ECM
	IGN	30A	Ignition switch, Start relay
	ABS.1	30A	ABS control
	ABS.2	30A	ABS control
	BLOWER	30A	Blower relay
Fuse	INJ.	15A	Injectors, Idle speed actuator, CMP, Canister purge valve
	SNSR	10A	ECM, Heated oxygen sensor, SMARTRA
	DRL	15A	DRL control
	H/LP WASHER	20A	Head lamp washer
	F/FOG	15A	Front fog lamp relay
	HORN	10A	Horn relay, TCM
	A/CON	10A	A/C relay
	H/LP(HI)	15A	Head lamp relay (High)
	H/LP(LO)	15A	Head lamp relay (Low)

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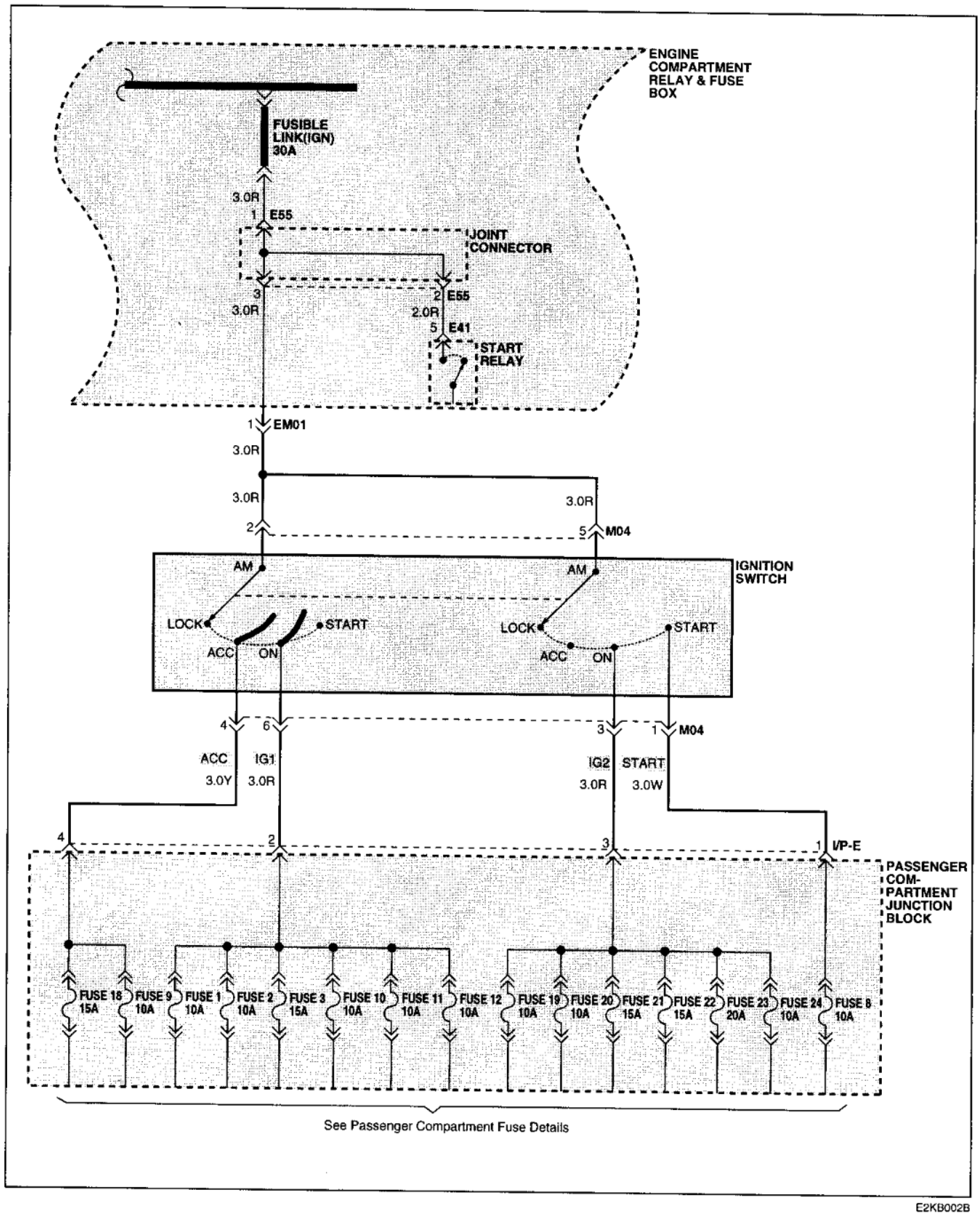
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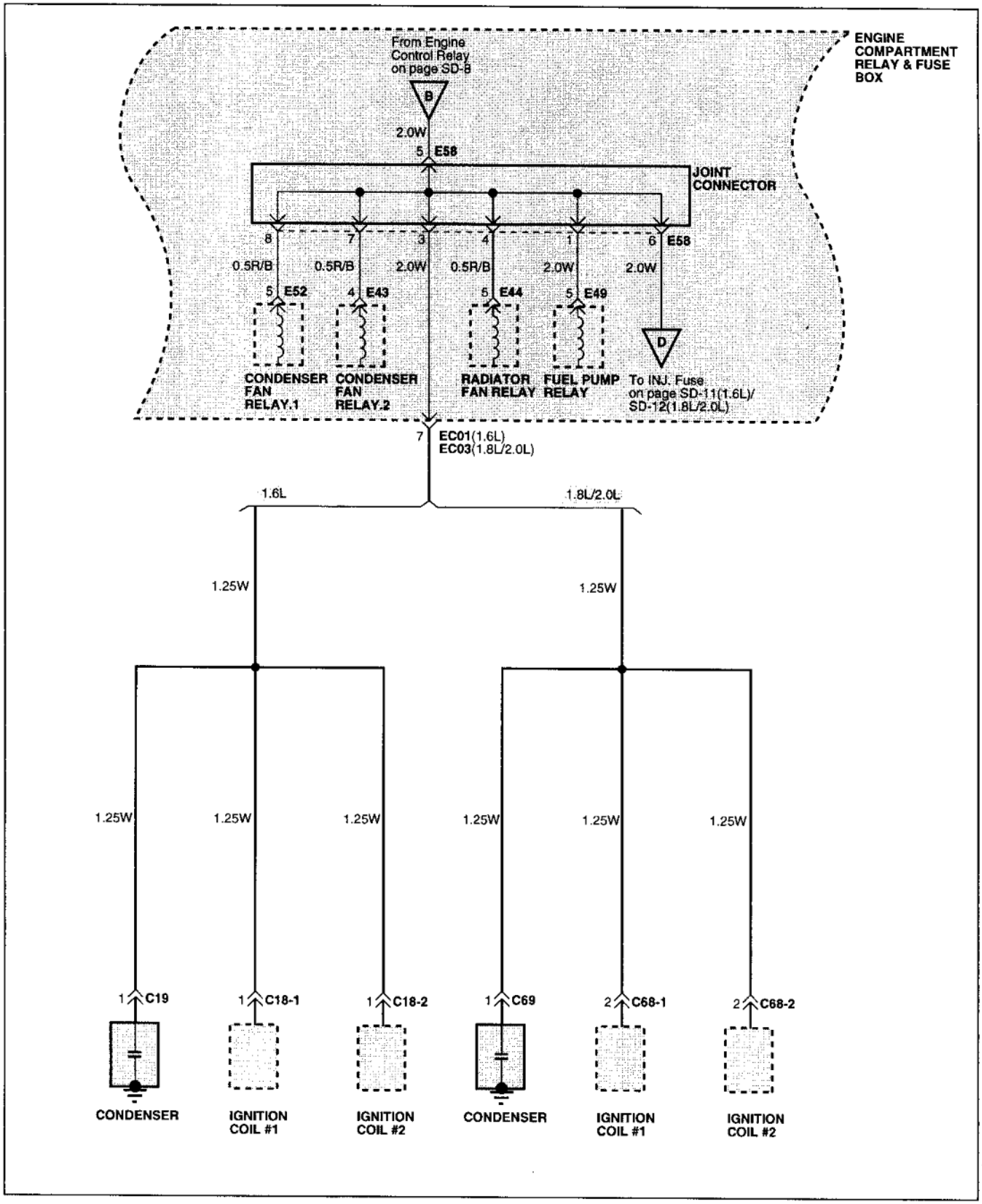
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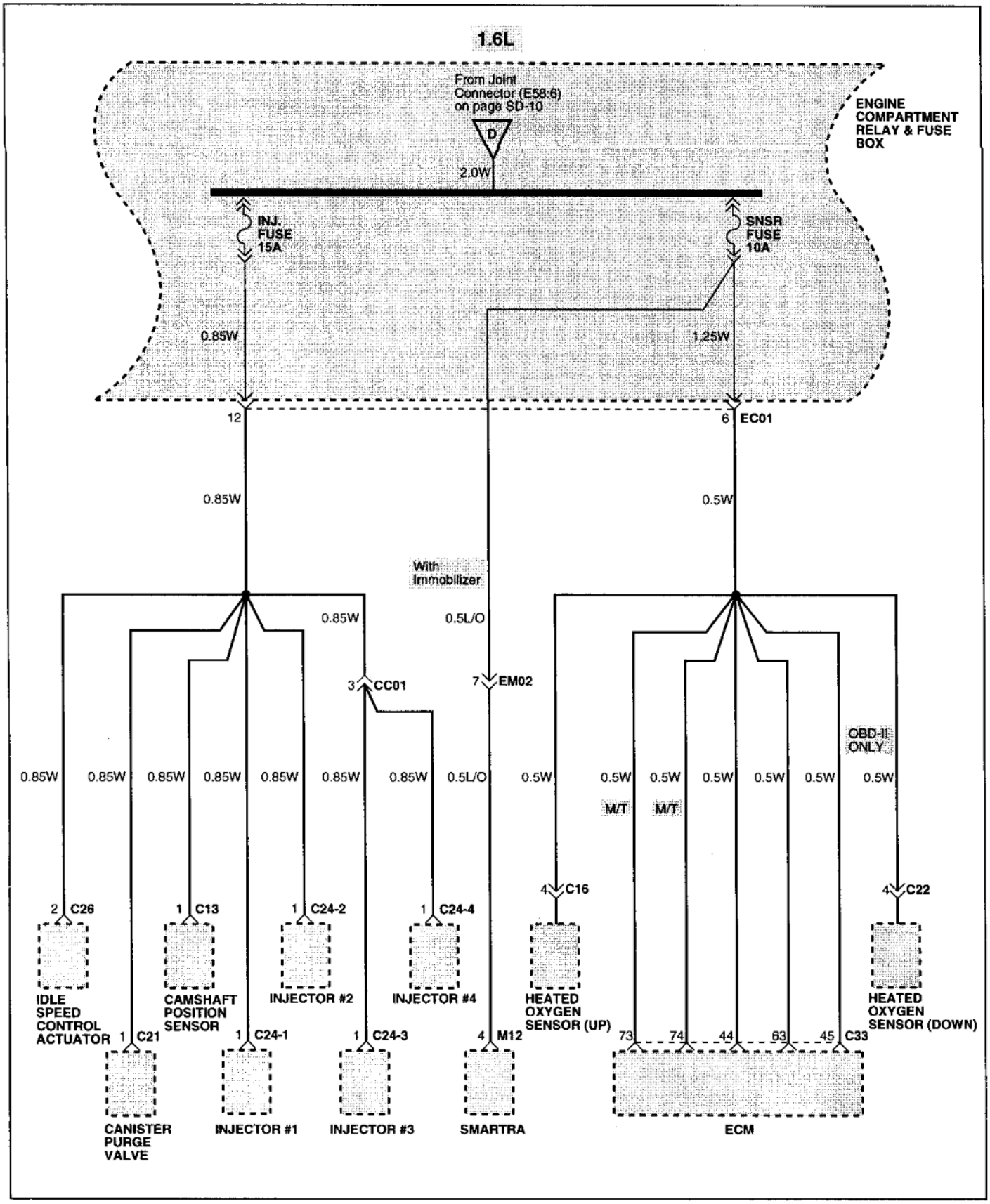
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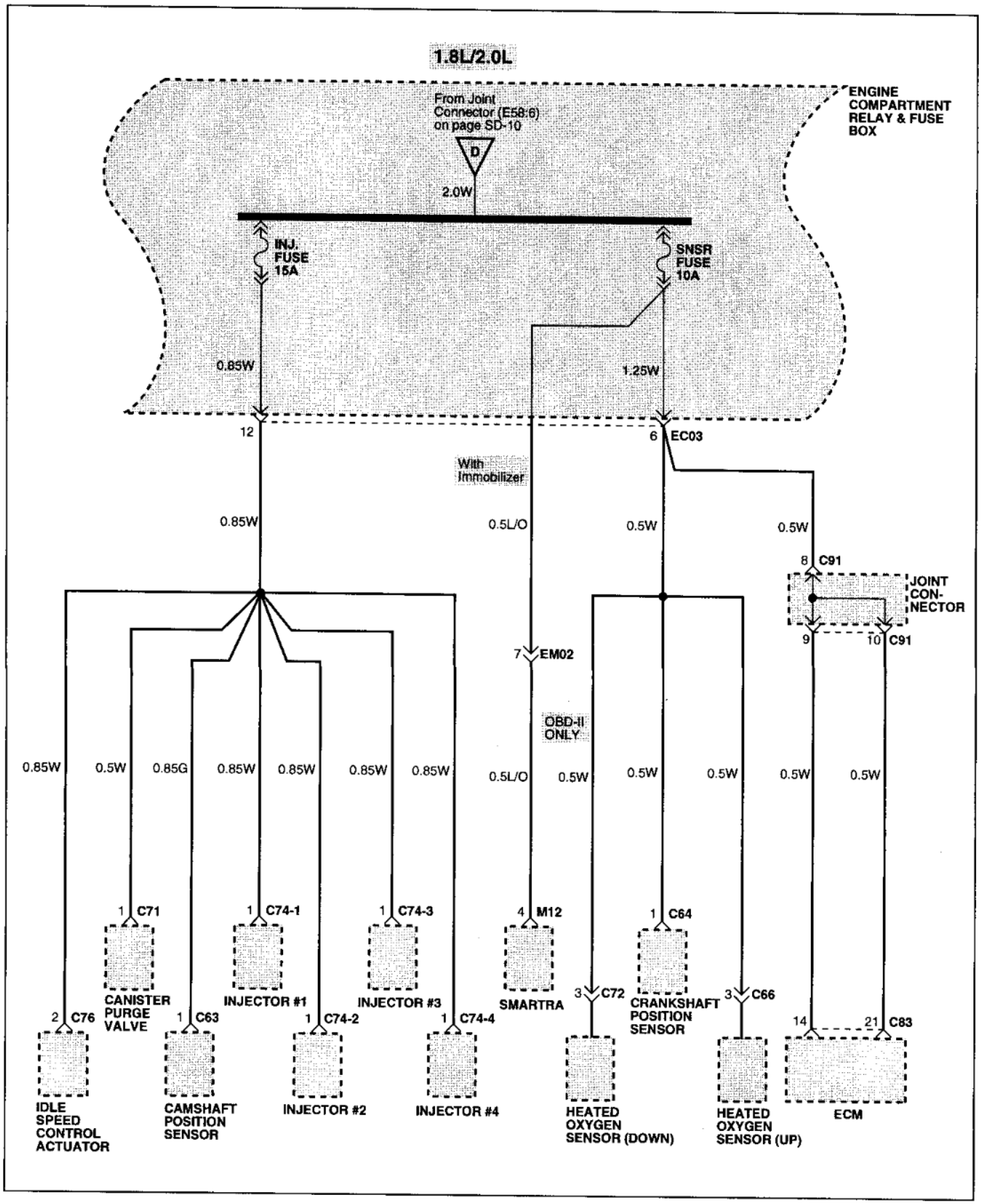
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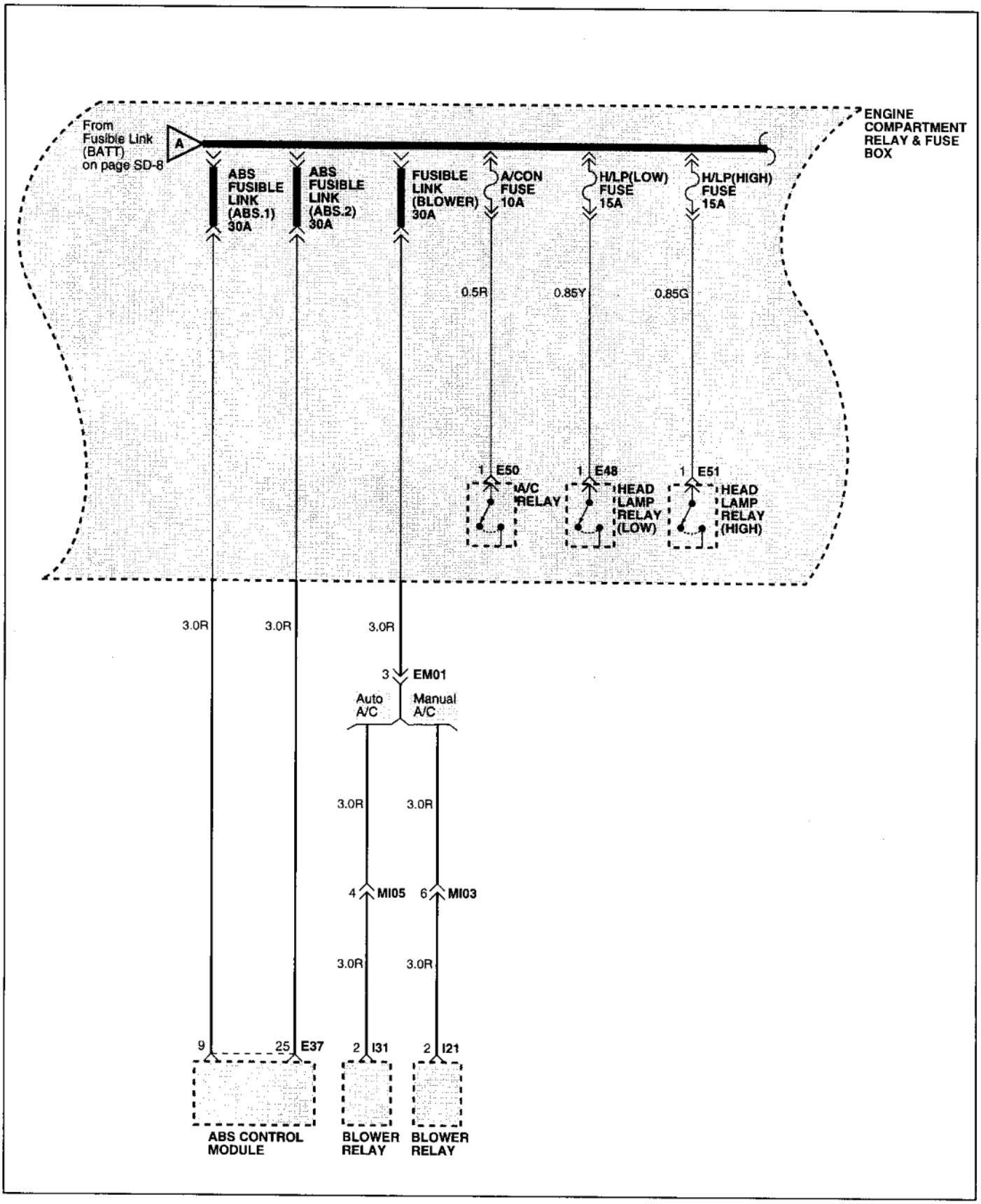
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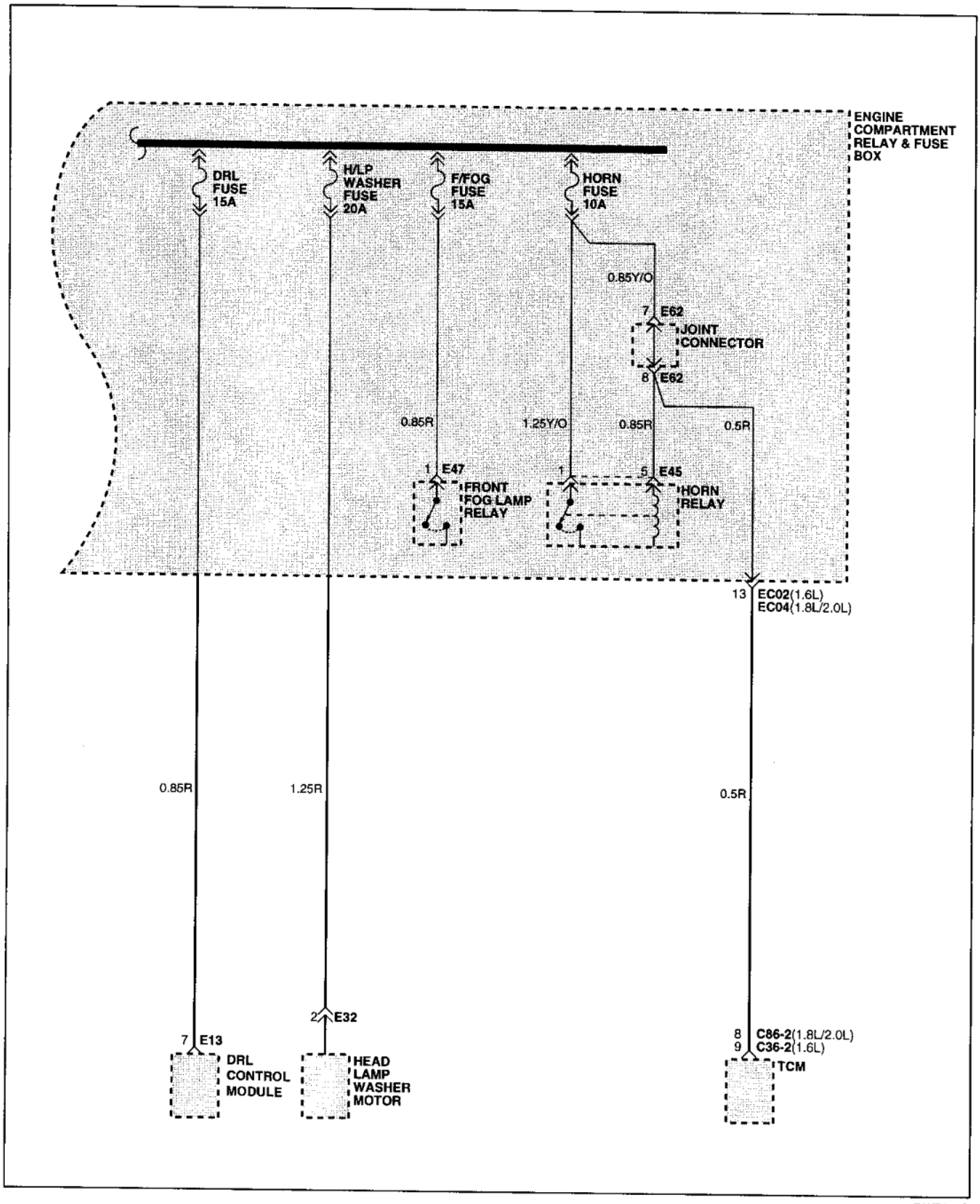
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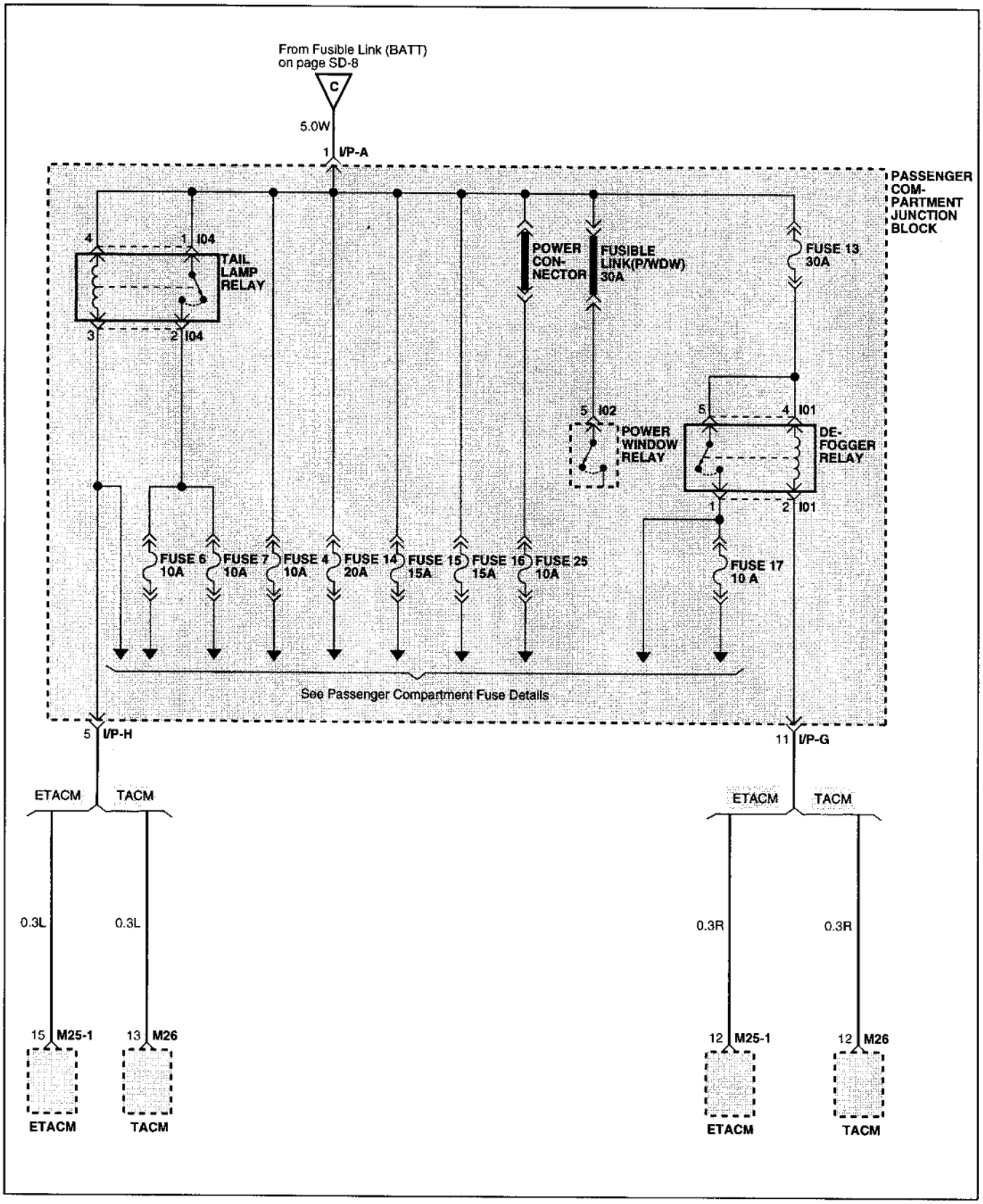
POWER DISTRIBUTION (7)



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POWER DISTRIBUTION (8)



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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C13	Camshaft position sensor (1.6L)	CL-16
C16	Heated oxygen sensor (Up) (1.6L)	CL-17
C18–1	Ignition coil #1 (1.6L)	CL-17
C18–2	Ignition coil #2 (1.6L)	CL-17
C19	Condenser (1.6L)	CL-17
C21	Canister purge valve (1.6L)	CL-17
C22	Heated oxygen sensor (Down) (OBD-II)	CL-17
C24–1	Injector #1 (1.6L)	CL-18
C24–2	Injector #2 (1.6L)	CL-18
C24–3	Injector #3 (1.6L)	CL-18
C24–4	Injector #4 (1.6L)	CL-18
C26	Idle speed control actuator (1.6L)	CL-18
C33	ECM (1.6L)	CL-18
C36–2	TCM (1.6L)	CL-18
C63	Camshaft position sensor (1.8L/2.0L)	CL-19
C64	Crankshaft position sensor (1.8L/2.0L)	CL-20
C66	Heated oxygen sensor (Up) (1.8L/2.0L)	CL-20
C68–1	Ignition coil #1 (1.8L/2.0L)	CL-20
C68–2	Ignition coil #2 (1.8L/2.0L)	CL-20
C69	Condenser (1.8L/2.0L)	CL-20
C71	Canister purge valve (1.8L/2.0L)	CL-20
C72	Heated oxygen sensor (Down) (OBD–II)	CL-20
C74–1	Injector #1 (1.8L/2.0L)	CL-20
C74–2	Injector #2 (1.8L/2.0L)	CL-20
C74–3	Injector #3 (1.8L/2.0L)	CL-20
C74–4	Injector #4 (1.8L/2.0L)	CL-20
C76	Idle speed control actuator (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
C86–2	TCM (1.8L/2.0L)	CL-21
C91	Joint connector (1.8L/2.0L)	CL-22
C93	A/T control relay (1.8L/2.0L)	CL-22
E20–1	Generator (B+)	CL-11
E20–2	Generator (S, L)	CL-11
E28	Battery terminal (+)	CL-11
E32	Head lamp washer motor	CL-12
E37	ABS control module	CL-12
E41	Start relay	CL-12
E42	Engine control relay	CL-12
E43	Condenser fan relay.2	CL-12
E44	Radiator fan relay.2	CL-12
E45	Horn relay	CL-12
E47	Front fog lamp relay	CL-12

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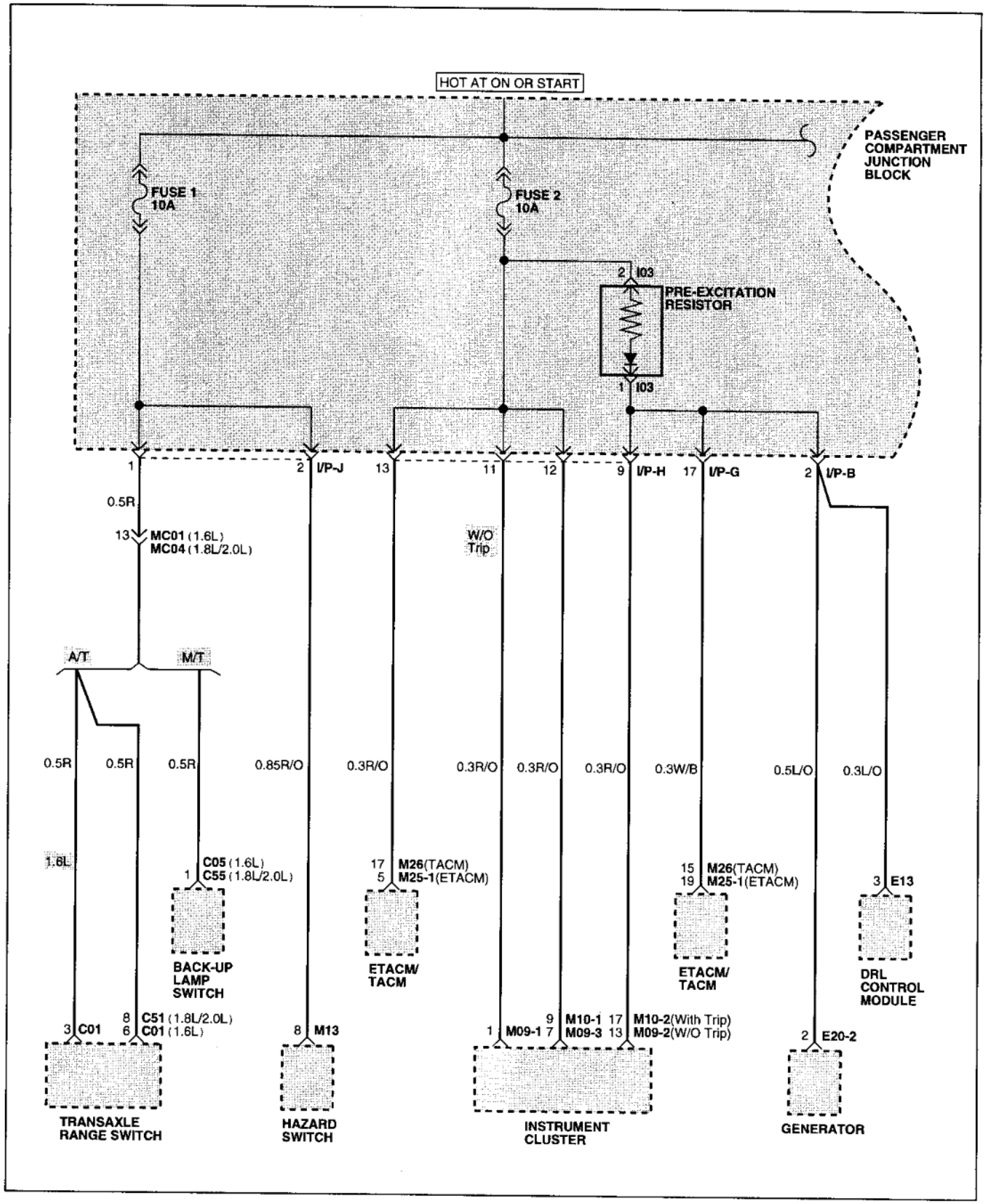
COMPONENT LOCATION INDEX (2)

Components		Location reference-page
E48	Head lamp relay (Low)	CL-12
E49	Fuel pump relay	CL-12
E50	A/C relay	CL-12
E51	Head lamp relay (High)	CL-12
E52	Condenser fan relay.1	CL-12
E55	Joint connector	CL-12
E57	Joint connector	CL-12
E58	Joint connector	CL-12
E62	Joint connector	CL-12
E68	Start motor	CL-12
I01	Defogger relay	CL-14
I02	Power window relay	CL-14
I04	Tail lamp relay	CL-14
I21	Blower relay (Maunal A/C)	CL-15
I31	Blower relay (Auto A/C)	CL-15
M04	Ignition switch	CL-2
M25–1	ETACM	CL-3
M26	TACM	CL-3
Connectors		
CC01		CL-22
EC01		CL-13
EC02		CL-13
EC03		CL-13
EC04		CL-13
EM01		CL-13
EM02		CL-13
I/P-A		CL-9
I/P-E		CL-9
I/P-G		CL-9
I/P-H		CL-9
MI03		CL-9
MI05		CL-9

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PASSENGER COMPARTMENT FUSE DETAILS E2KB0030

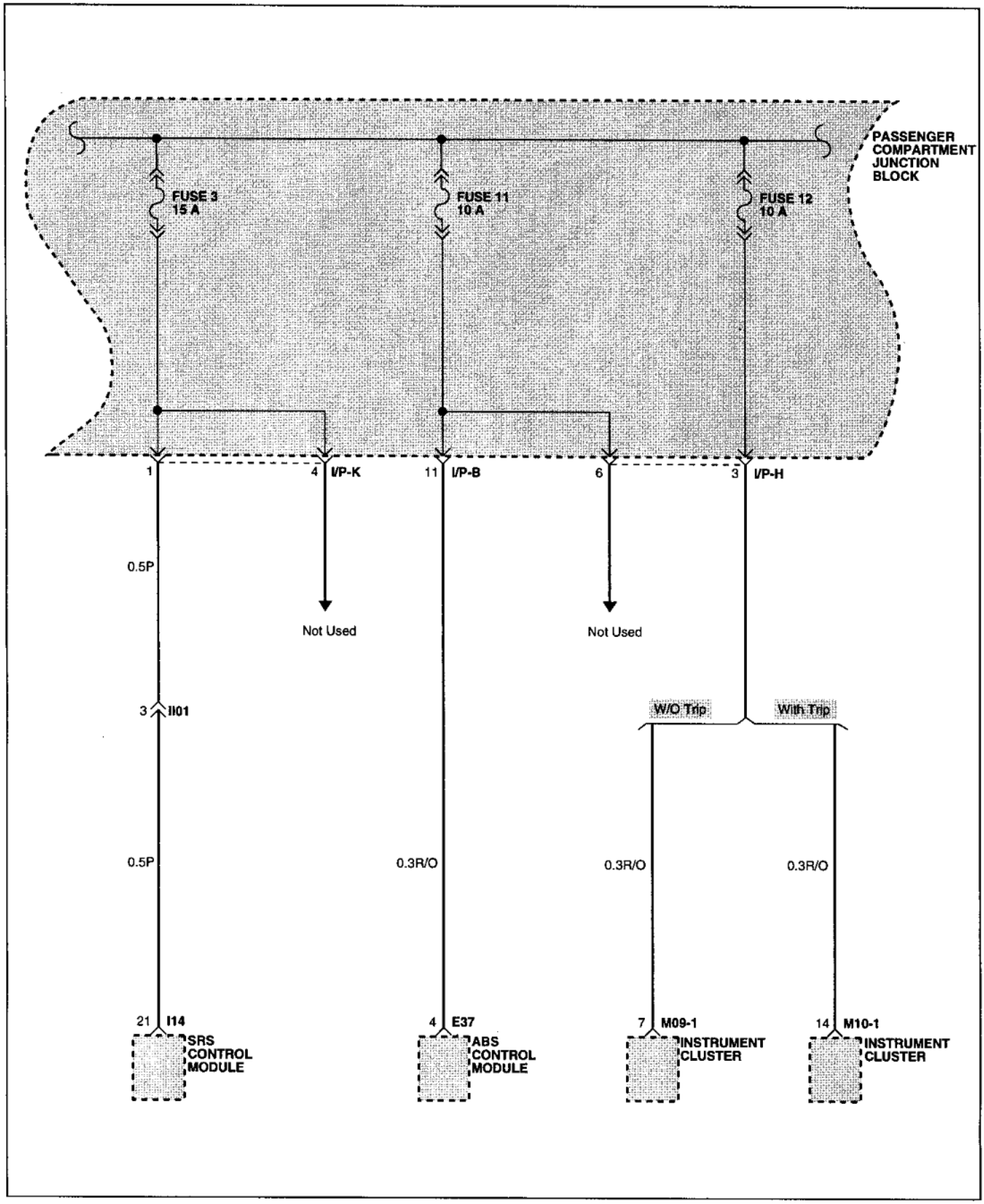
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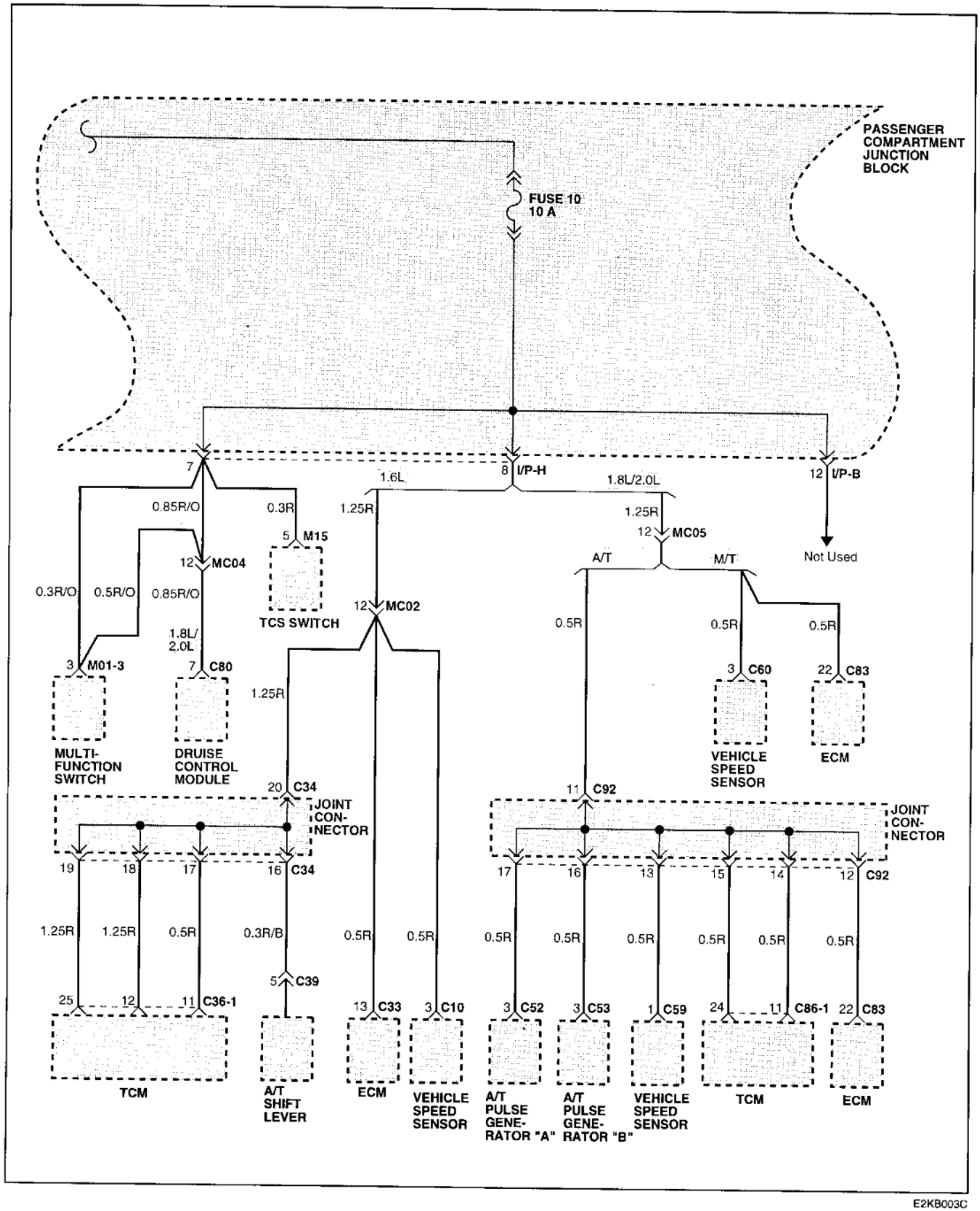
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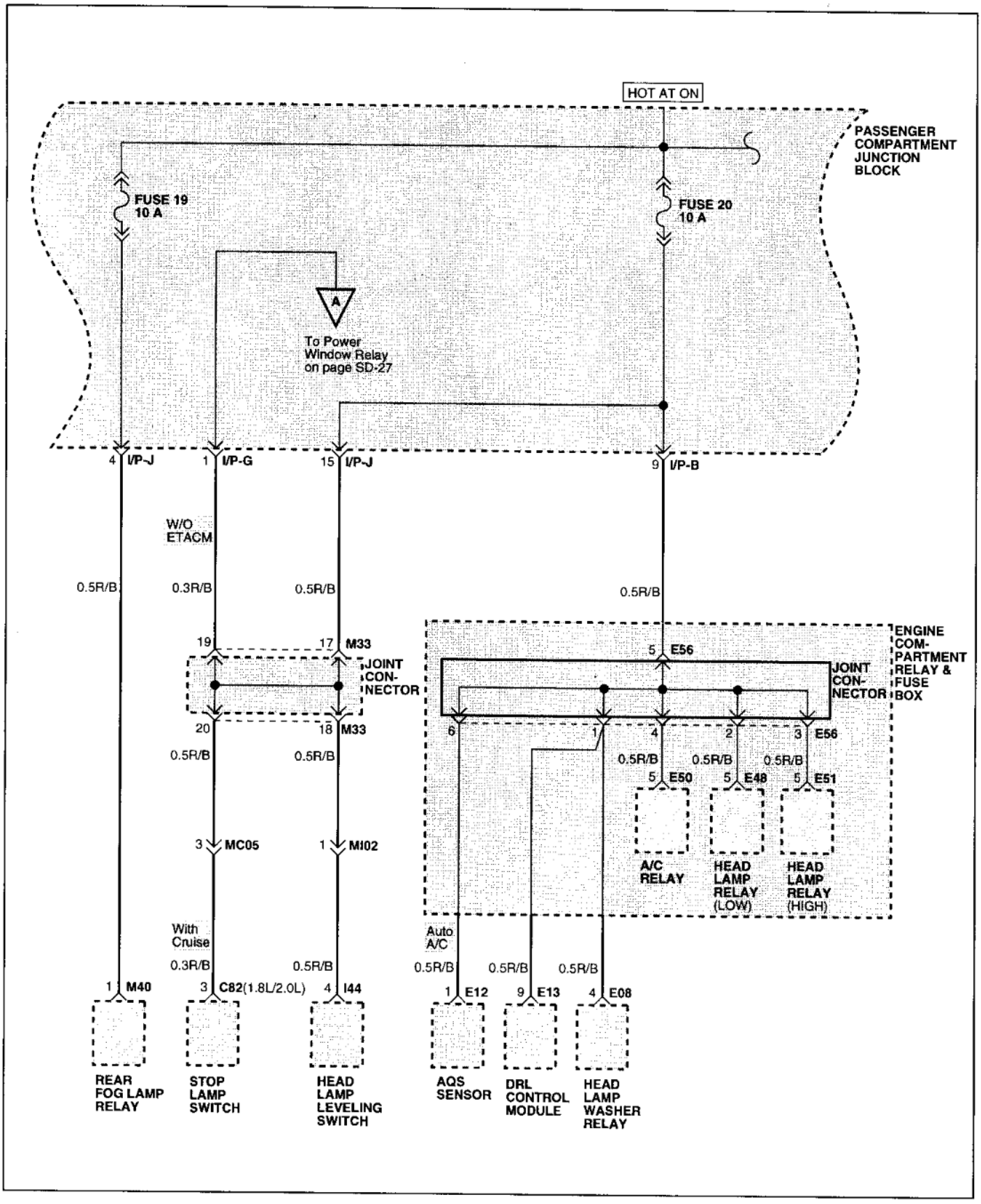
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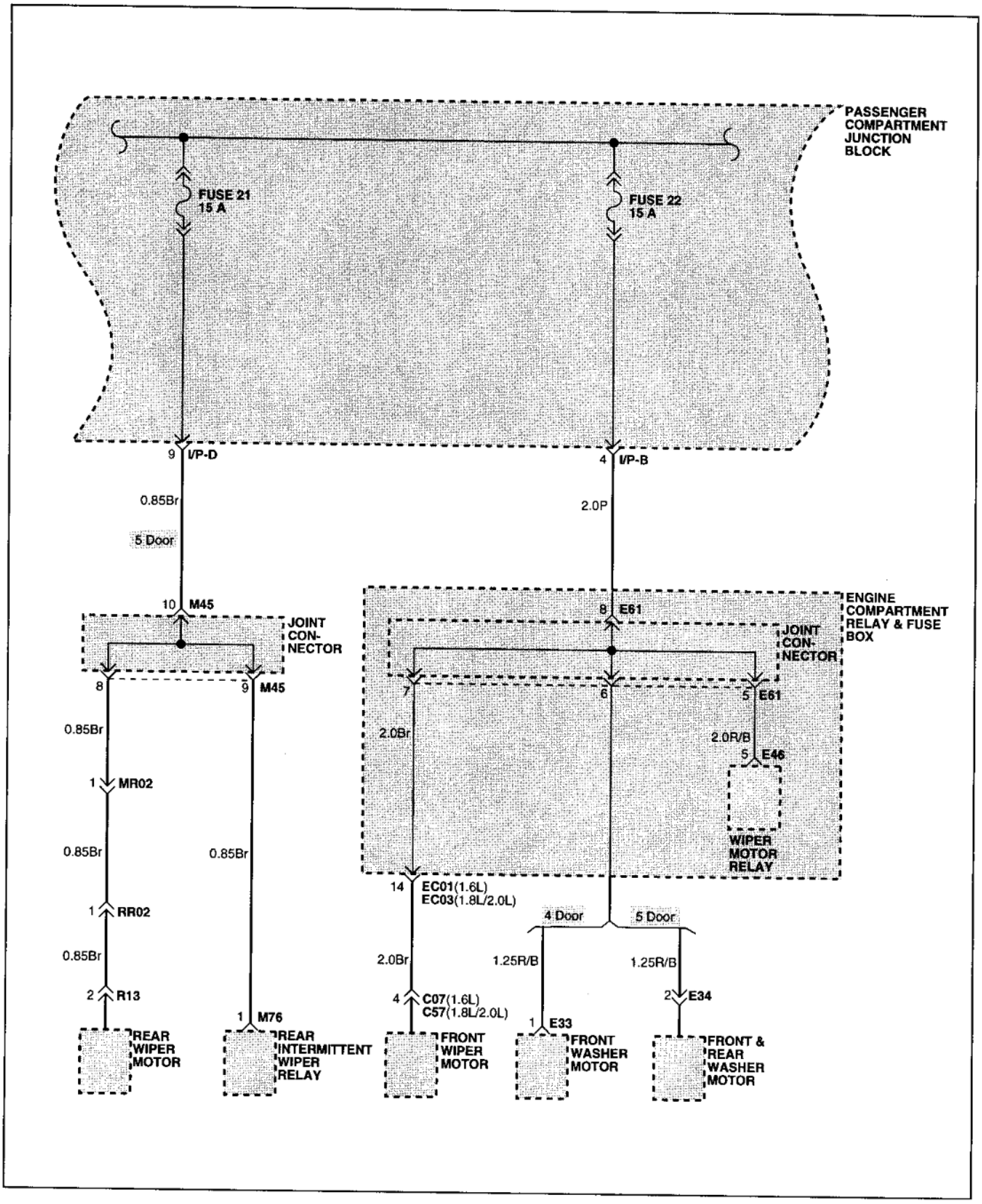
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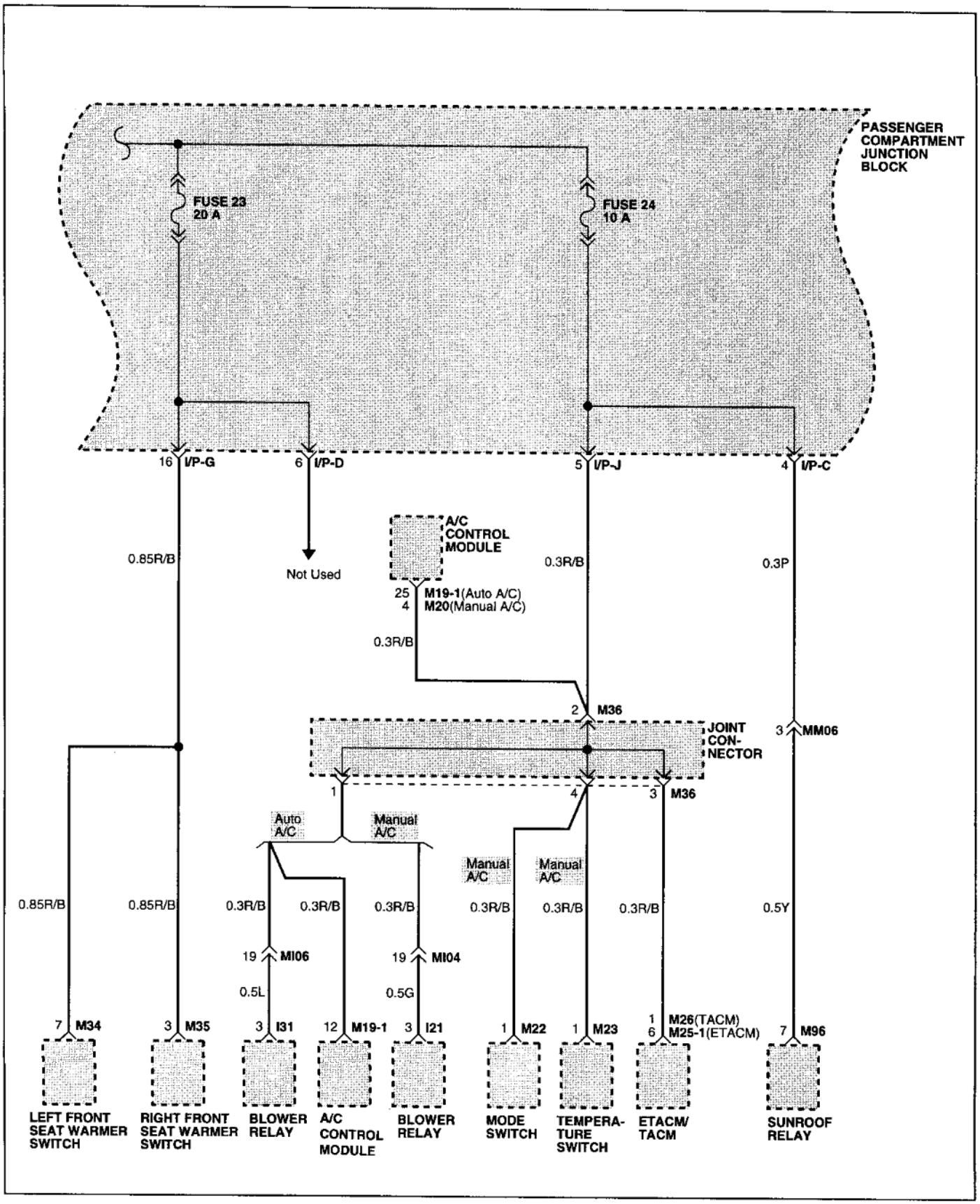
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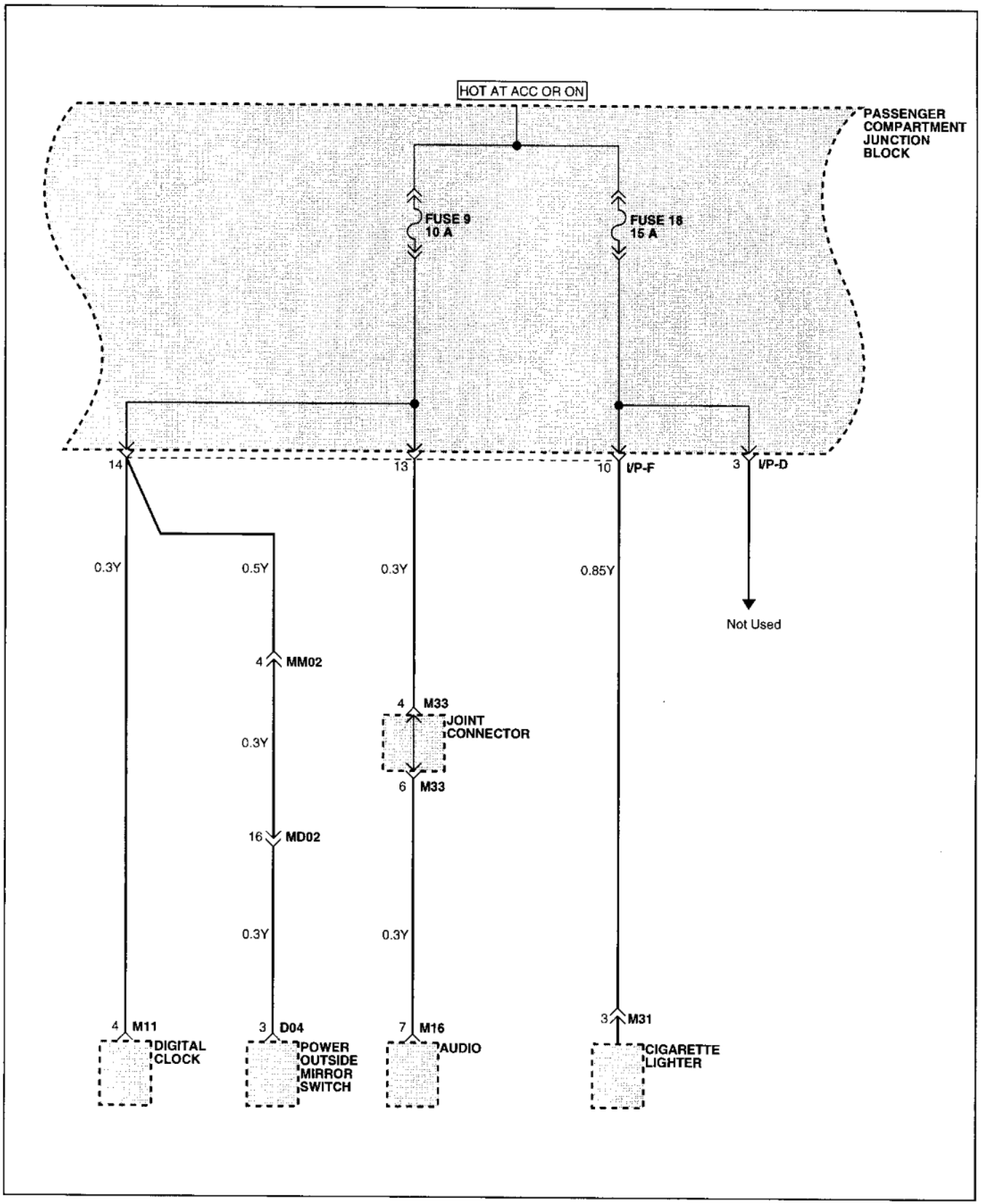
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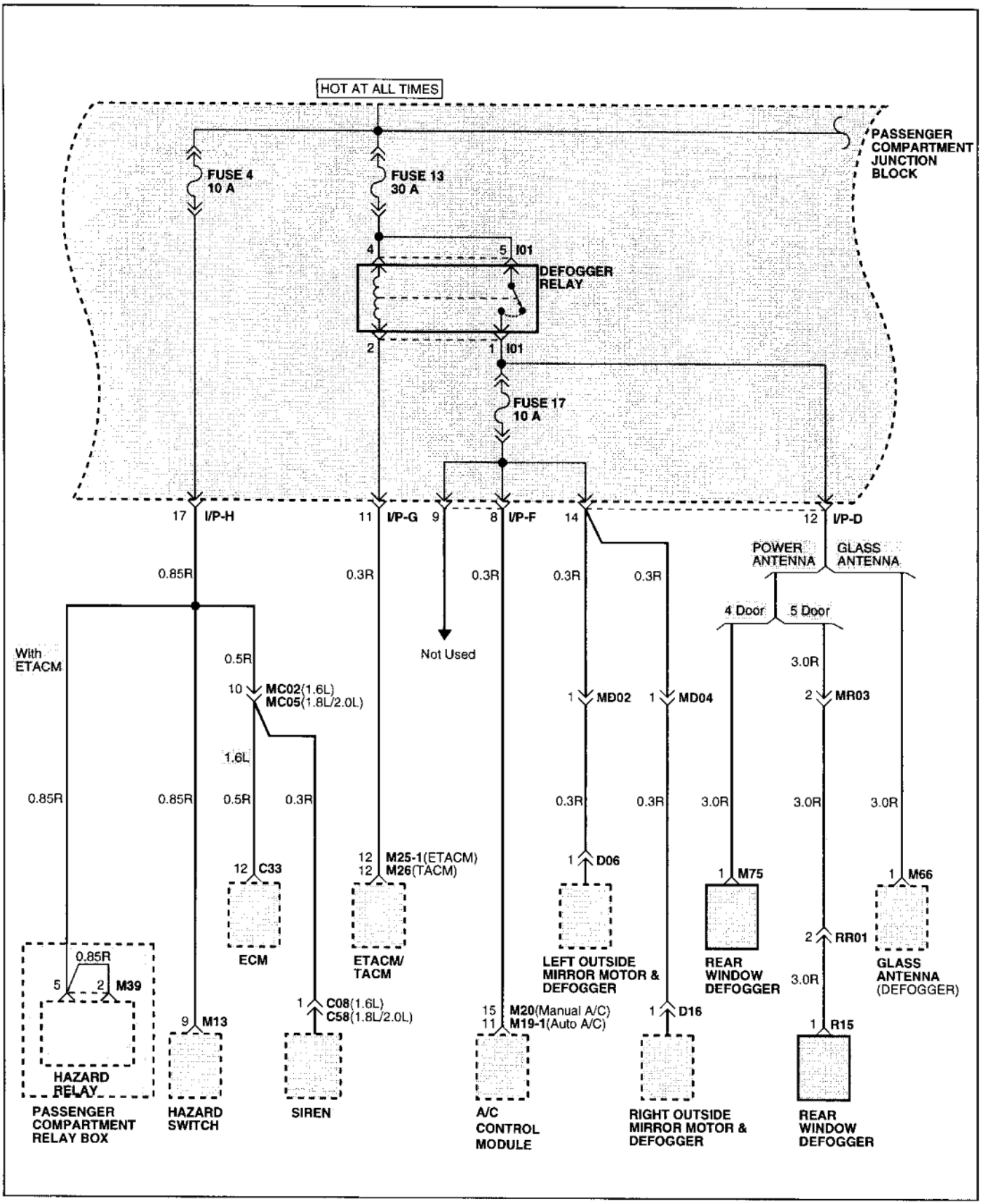
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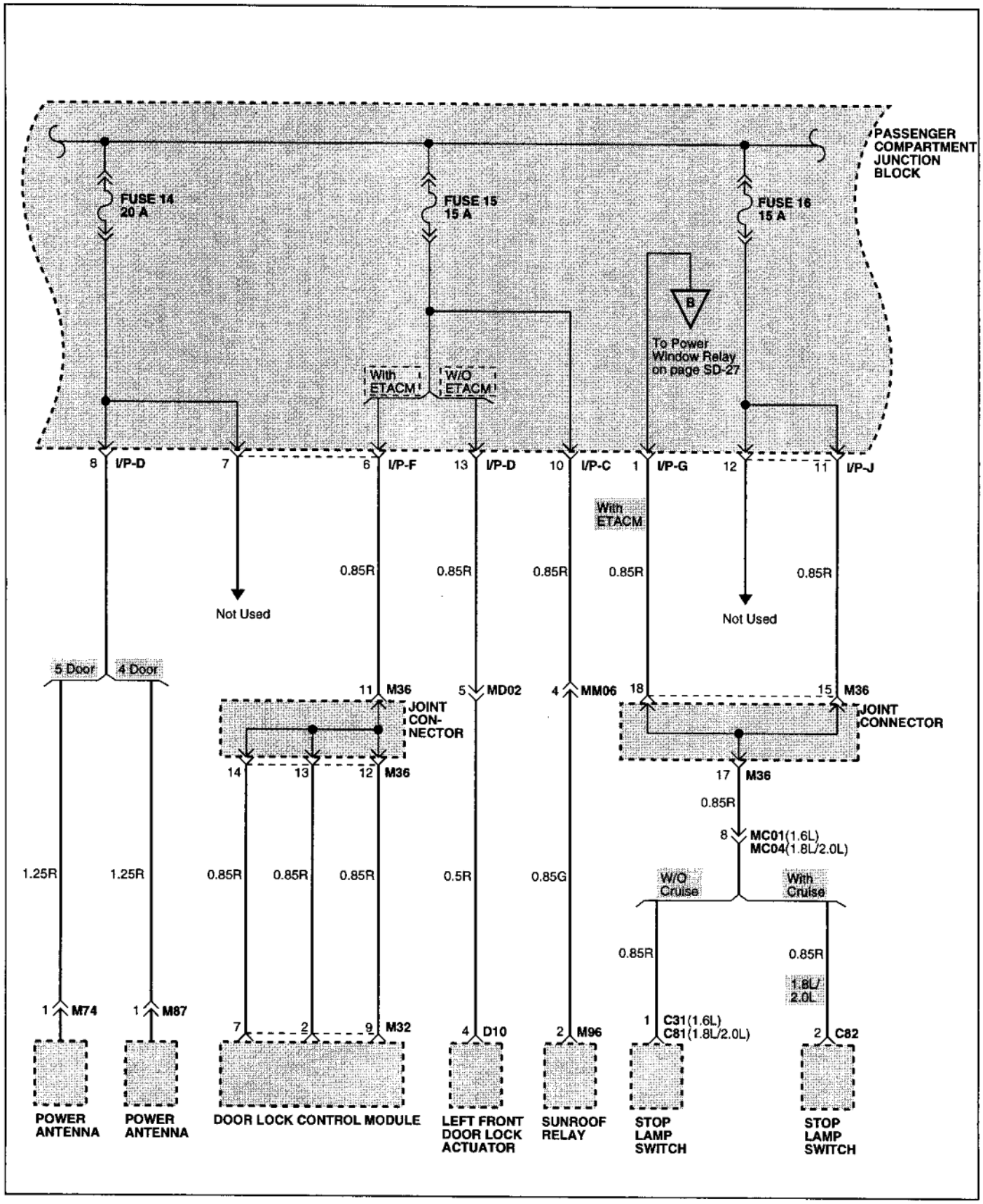
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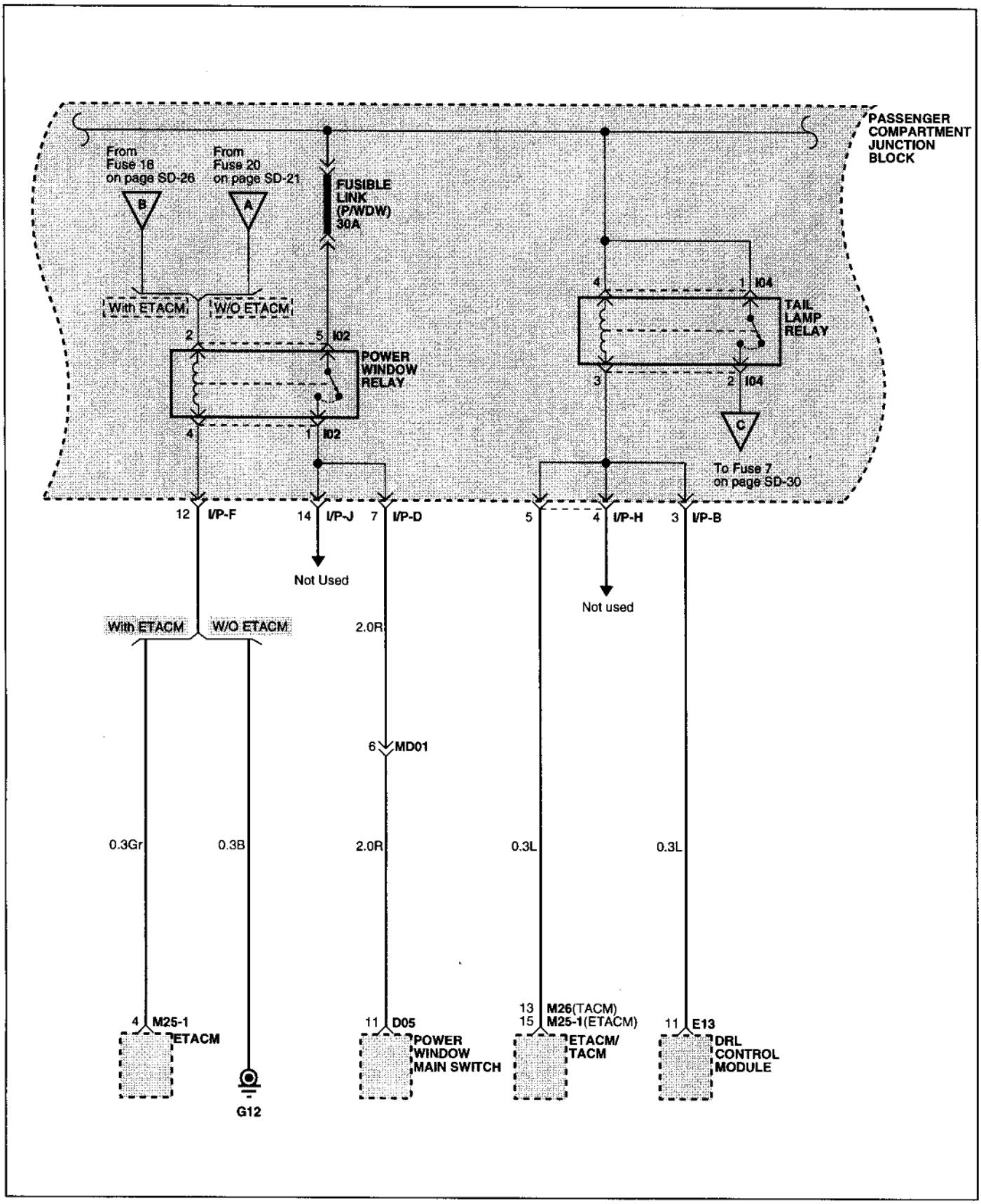
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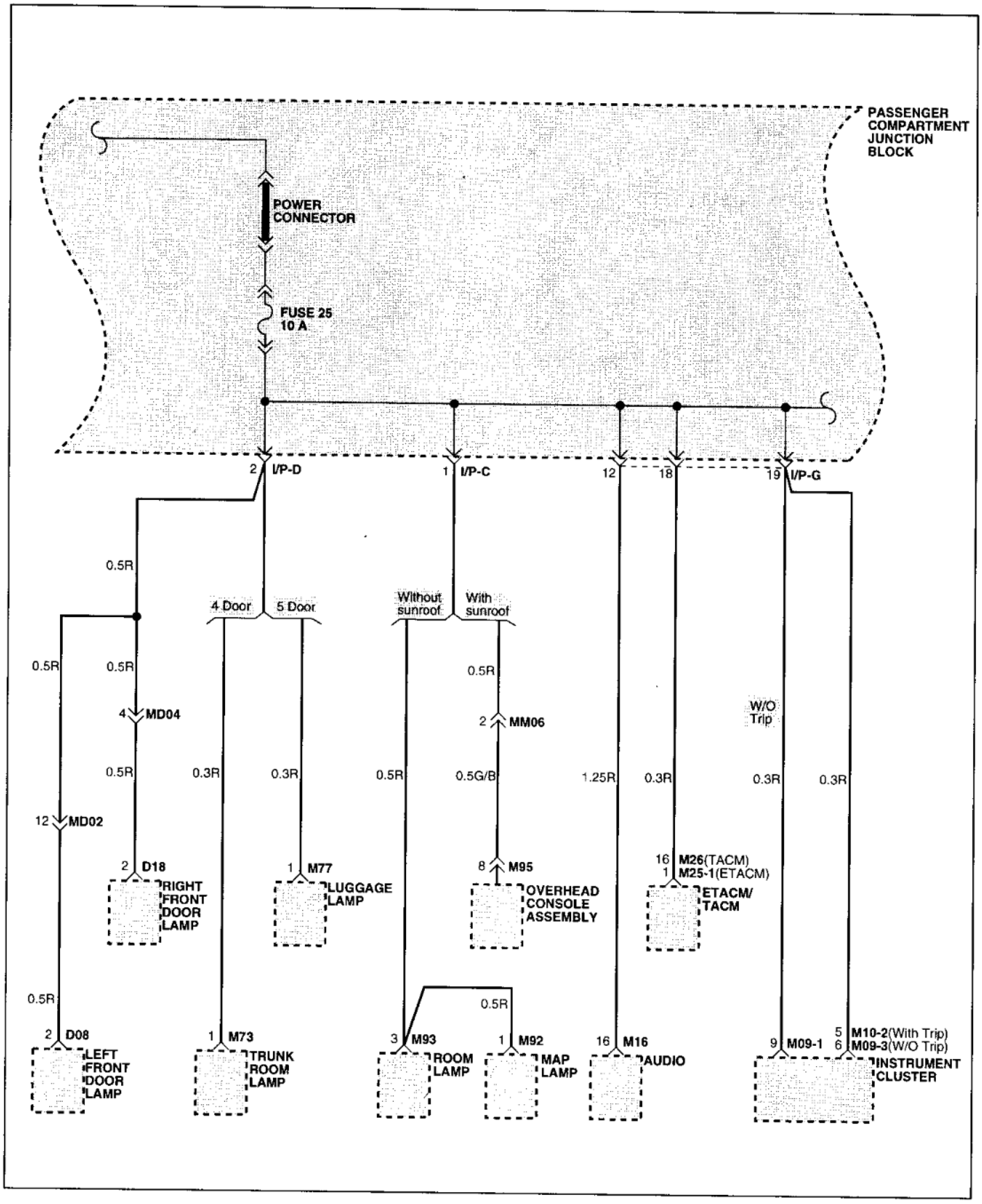
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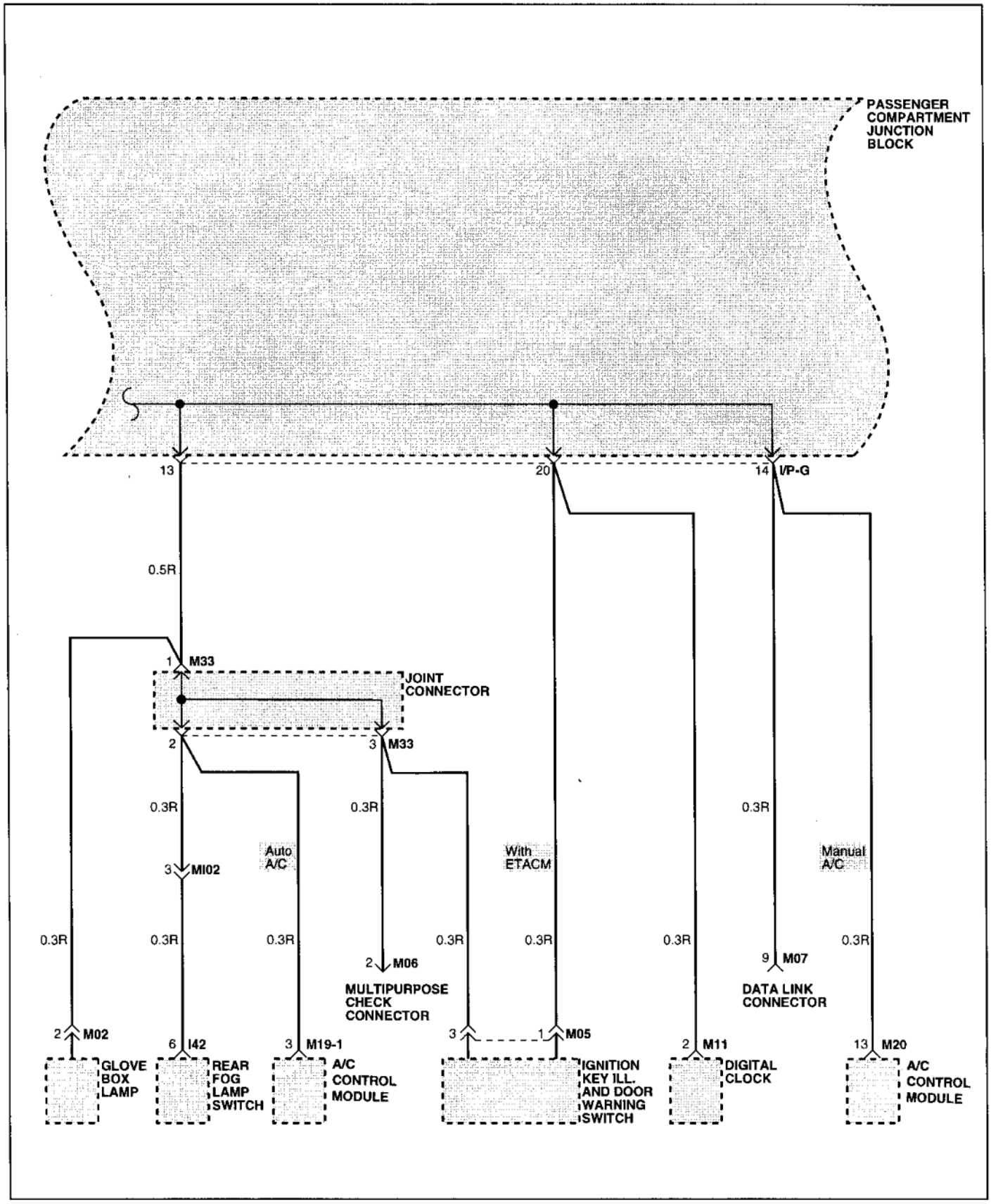
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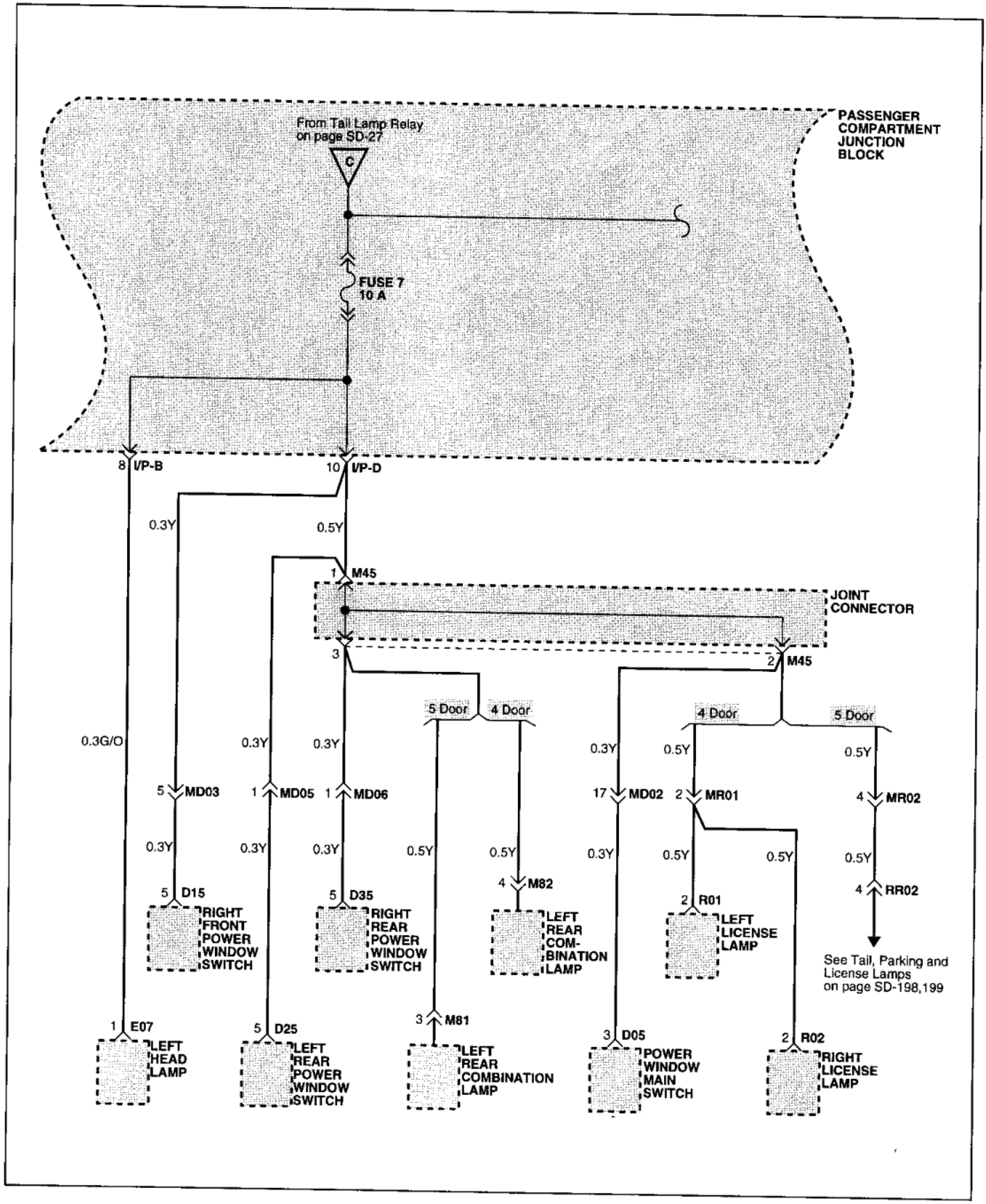
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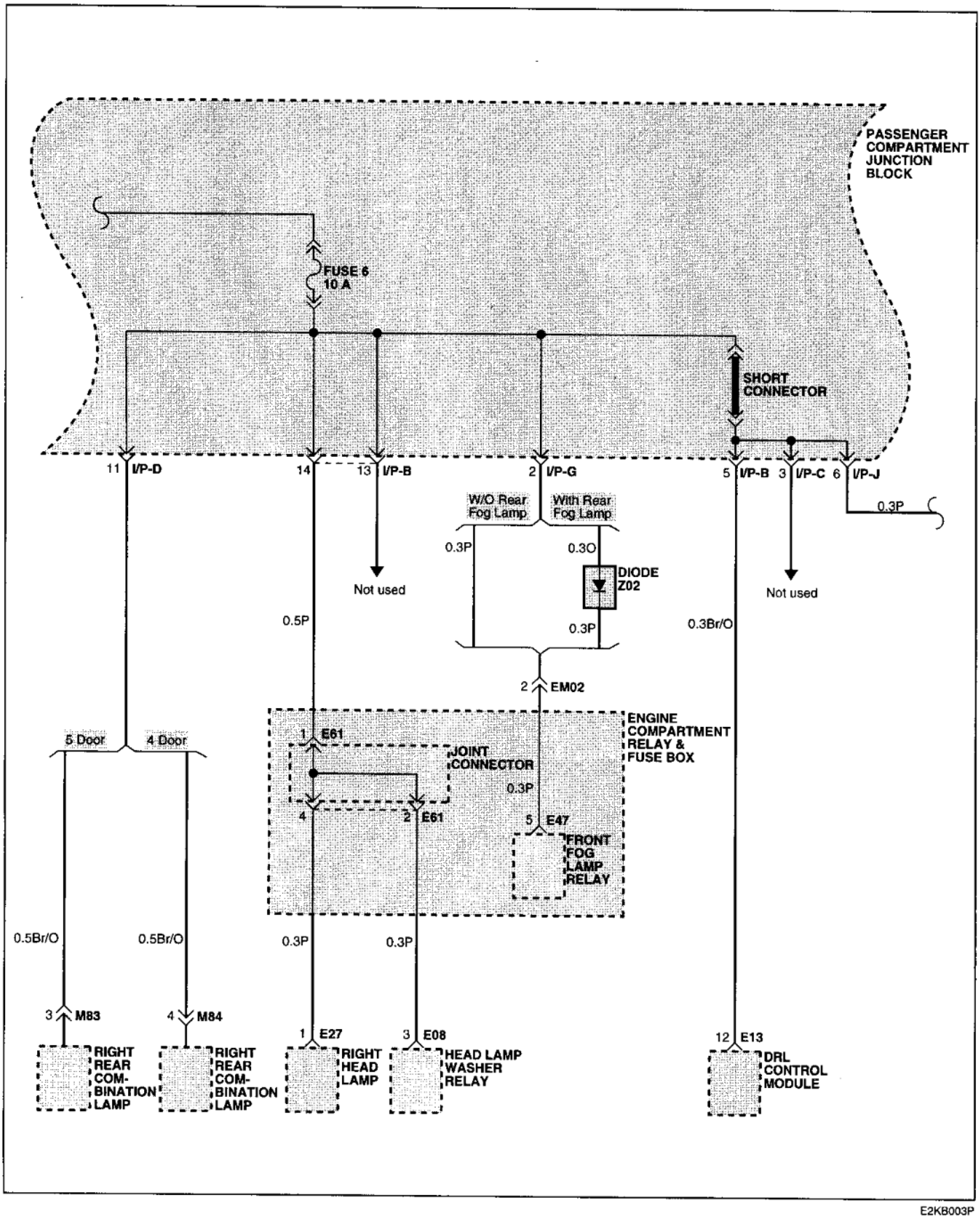
PASSENGER COMPARTMENT FUSE DETAILS (13)



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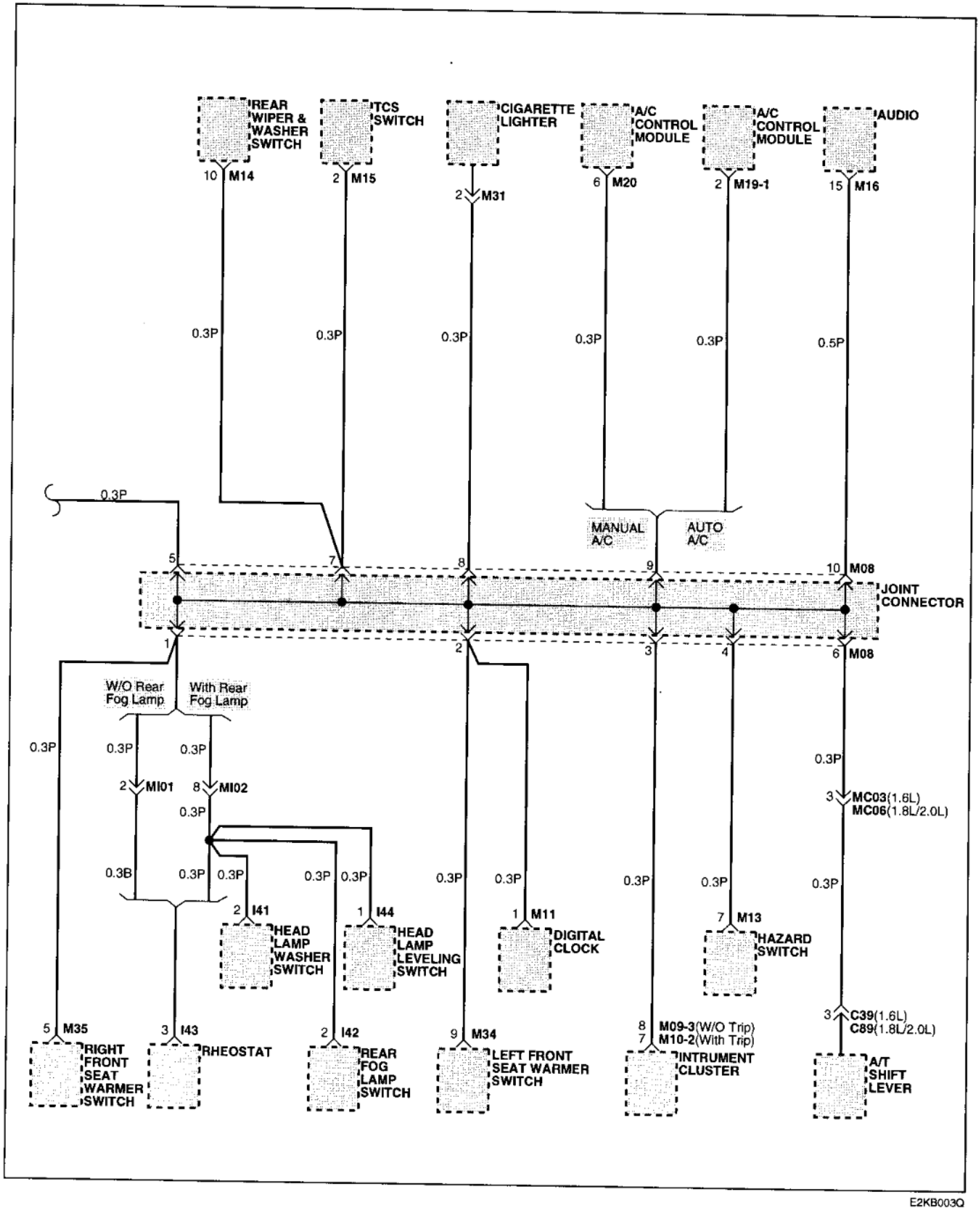
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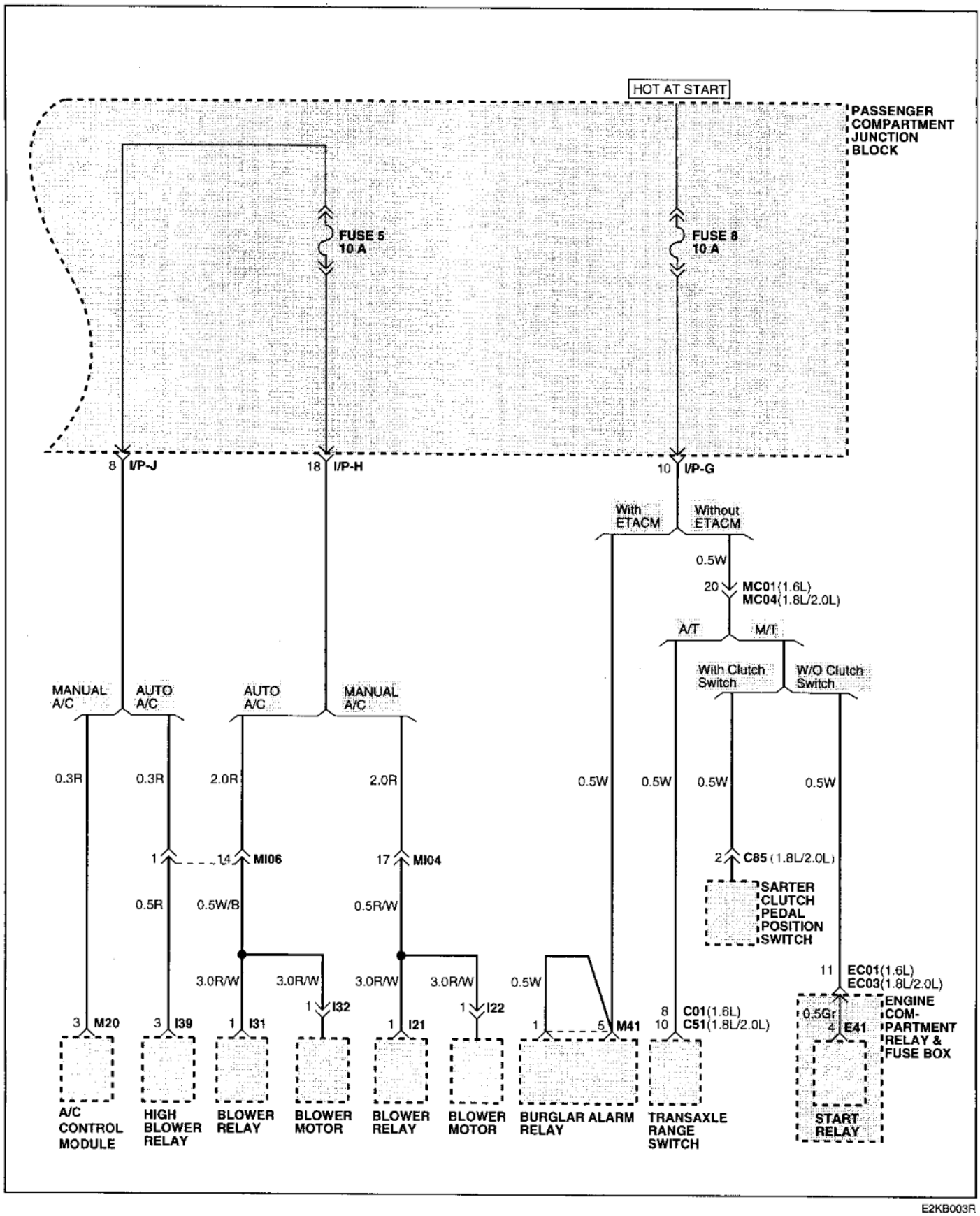
PASSENGER COMPARTMENT FUSE DETAILS (15)



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PASSENGER COMPARTMENT FUSE DETAILS (16)



E2KB003R

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch (1.6L)	CL-16
C05	Back-up lamp switch (1.6L)	CL-16
C07	Front wiper motor (1.6L)	CL-16
C08	Siren (1.6L)	CL-16
C10	Vehicle speed sensor (1.6L)	CL-16
C31	Stop lamp switch (1.6L)	CL-18
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C39	A/T Shift lever (1.6L)	CL-18
C51	Transaxle range switch (1.8L/2.0L)	CL-18
C52	A/T pulse generator 'A' (1.8L/2.0L)	CL-18
C53	A/T pulse generator 'B' (1.8L/2.0L)	CL-18
C55	Back-up lamp switch (1.8L/2.0L)	CL-19
C57	Front wiper motor (1.8L/2.0L)	CL-19
C58	Siren (1.8L/2.0L)	CL-19
C59	Vehicle speed sensor (A/T) (1.8L/2.0L)	CL-19
C60	Vehicle speed sensor (M/T) (1.8L/2.0L)	CL-19
C80	Cruise control module (1.8L/2.0L)	CL-21
C81	Stop lamp switch (W/O cruise) (1.8L/2.0L)	CL-21
C82	Stop lamp switch (With cruise) (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
C85	Starter clutch pedal position switch (M/T)	CL-21
C86–1	TCM (1.8L/2.0L)	CL-21
C89	A/T shift lever ILL. (1.8L/2.0L)	CL-21
C92	Joint connector (1.8L/2.0L)	CL-22
E07	Left head lamp	CL-10
E12	AQS sensor (Auto A/C)	CL-10
E20–2	Generator (S,L)	CL-11
E27	Right head lamp	CL-11
E33	Front washer motor (4Door)	CL-12
E34	Front & Rear washer motor (5Door)	CL-12
E37	ABS control module	CL-12
E41	Start relay	CL-12
E46	Wiper motor relay	CL-12
E47	Front fog lamp relay	CL-12
E48	Head lamp relay (Low)	CL-12
E50	A/C relay	CL-12
E51	Head lamp relay (High)	CL-12

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COMPONENT LOCATION INDEX (2)

Components		Location reference-page
E56	Joint connector	CL-12
E61	Joint connector	CL-12
D04	Power outside mirror switch	CL-23
D05	Power window main switch	CL-23
D06	Left outside mirror motor & defogger	CL-23
D08	Left front door lamp	CL-23
D10	Left front door lock actuator (W/O ETACM)	CL-23
D15	Right front power window switch	CL-23
D16	Right outside mirror motor & defogger	CL-23
D18	Right front door lamp	CL-23
D25	Left rear power window switch	CL-23
D35	Right rear power window switch	CL-23
I02	Power window relay	CL-14
I03	Pre-excitation resistor	CL-14
I04	Tail lamp relay	CL-14
I14	SRS control module	CL-14
I21	Blower relay (Manual A/C)	CL-15
I22	Blower motor (Manual A/C)	CL-15
I31	Blower relay (Autol A/C)	CL-15
I32	Blower motor (Auto A/C)	CL-15
I39	High blower relay (Auto A/C)	CL-15
I41	Head lamp washer switch	CL-15
I42	Rear fog lamp switch	CL-15
I43	Rheostat	CL-15
I44	Head lamp leveling switch	CL-15
M01–3	Multifunction swtich	CL-2
M02	Glove box lamp	CL-2
M05	Ignition key ILL. and Door warning switch	CL-2
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M08	Joint connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M11	Digital clock	CL-3
M13	Hazard switch	CL-3
M14	Rear wiper & washer switch	CL-3
M15	TCS switch	CL-3
M16	Audio	CL-3

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COMPONENT LOCATION INDEX (3)

Component		Location reference-page
M19–1	A/C control module (Auto A/C)	CL-3
M20	A/C control module (Manual A/C)	CL-3
M22	Mode switch (Manual A/C)	CL-3
M23	Temperature switch (Manual A/C)	CL-3
M25–1	ETACM	CL-3
M26	TACM	CL-3
M31	Cigarette lighter	CL-4
M32	Door lock control module (With ETACM)	CL-4
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M39	Hazard relay	CL-4
M40	Rear fog lamp relay	CL-5
M41	Burglar alarm relay	CL-5
M45	Joint connector	CL-5
M66	Glass antenna	CL-6
M66–1	Rear window defogger (+)	CL-6
M73	Trunk room lamp (4Door)	CL-7
M75	Rear window defogger (+)	CL-7
M82	Left rear combination lamp (4Door)	CL-7
M84	Right rear combination lamp (4Door)	CL-7
M87	Power antenna (4Door)	CL-7
M92	Map lamp	CL-7
M93	Room lamp	CL-7
M95	Overhead console assembly	CL-8
M96	Sunroof relay	CL-8
Connectors		
EC01		CL-13
EC03		CL-13
EM02		CL-13
II01		CL-15
I/P-B		CL-9
I/P-C		CL-9
I/P-D		CL-9
I/P-F		CL-9
I/P-G		CL-9
I/P-H		CL-9
I/P-J		CL-9
I/P-K		CL-9

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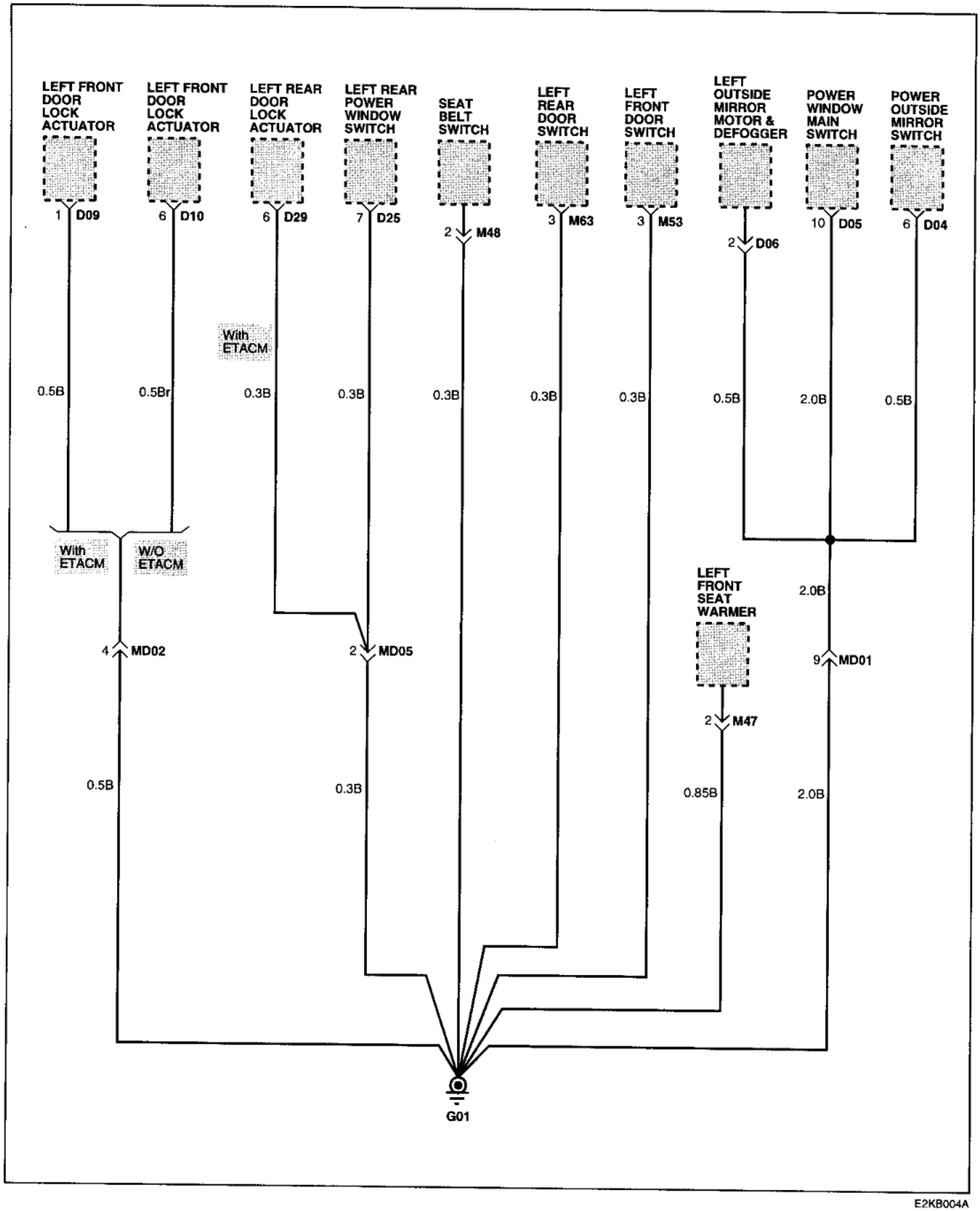
COMPONENT LOCATION INDEX (4)

Connectors	Location reference-page
MC01	CL-8
MC02	CL-8
MC04	CL-8
MC05	CL-8
MD01	CL-8
MD02	CL-8
MD03	CL-8
MD04	CL-8
MD05	CL-8
MD06	CL-8
MI02	CL-8
MI06	CL-9
MM02	CL-9
MM06	CL-9
MR01	CL-9
Grounds	
G12	CL-26
Diode	
Z02	CL-27

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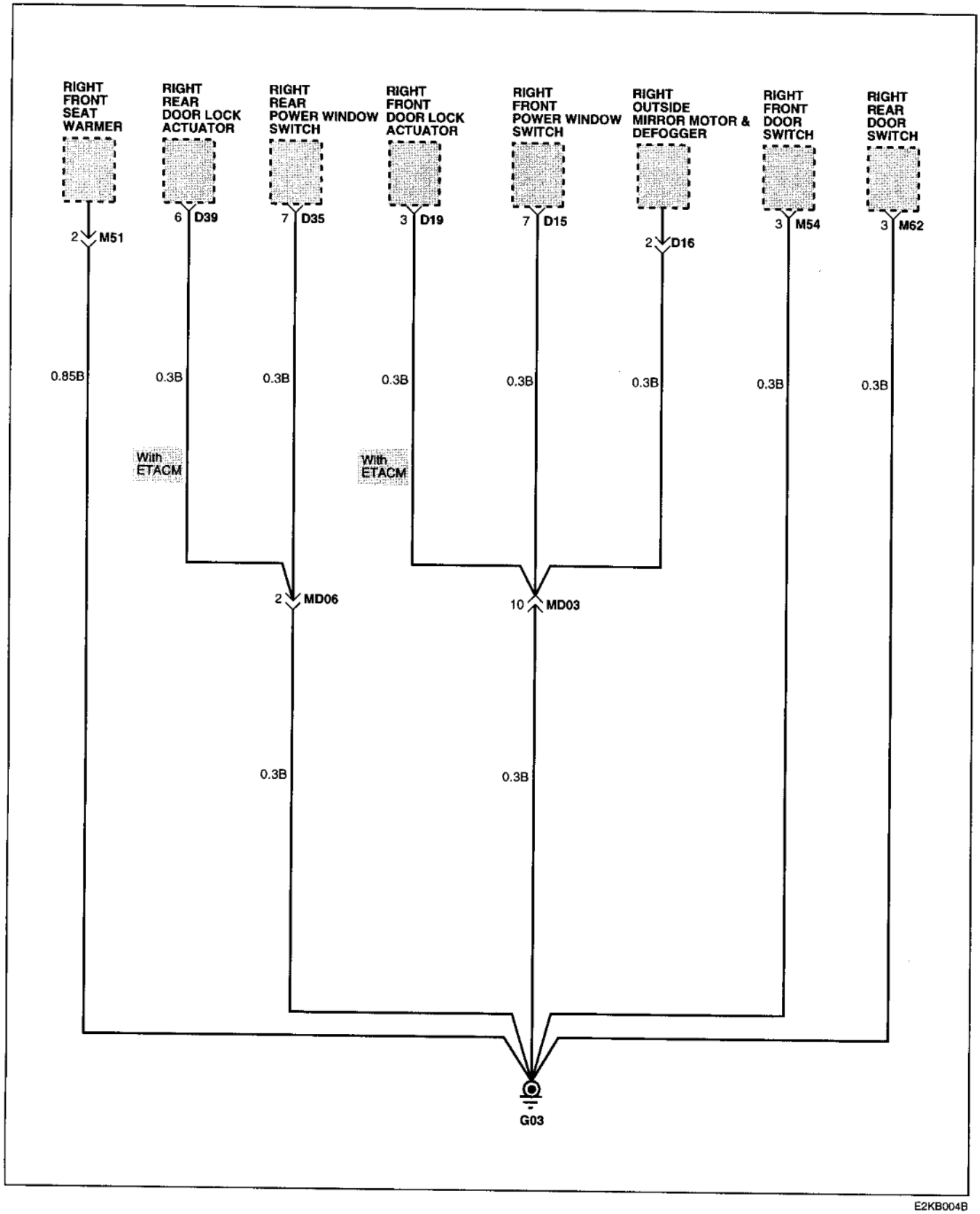
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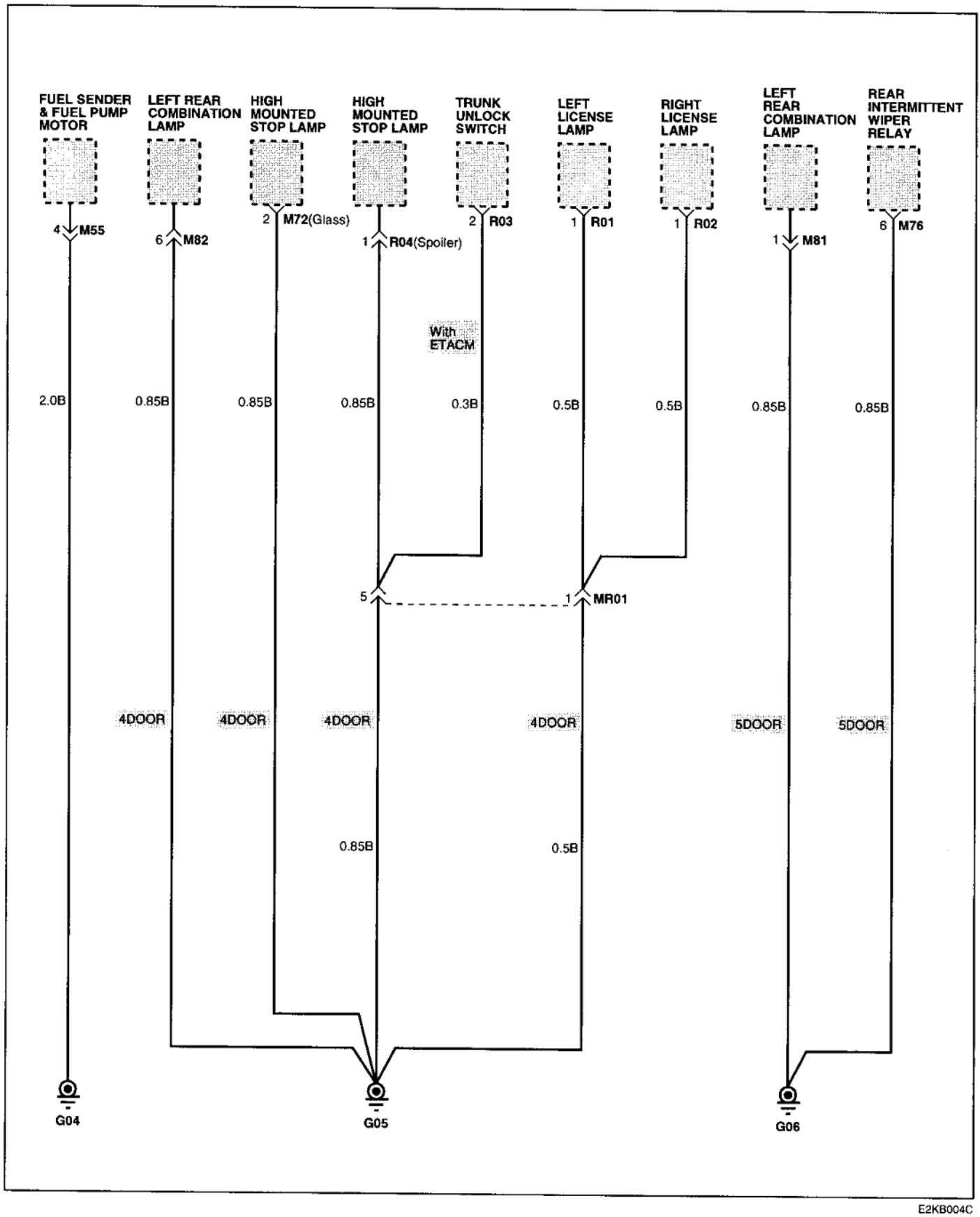
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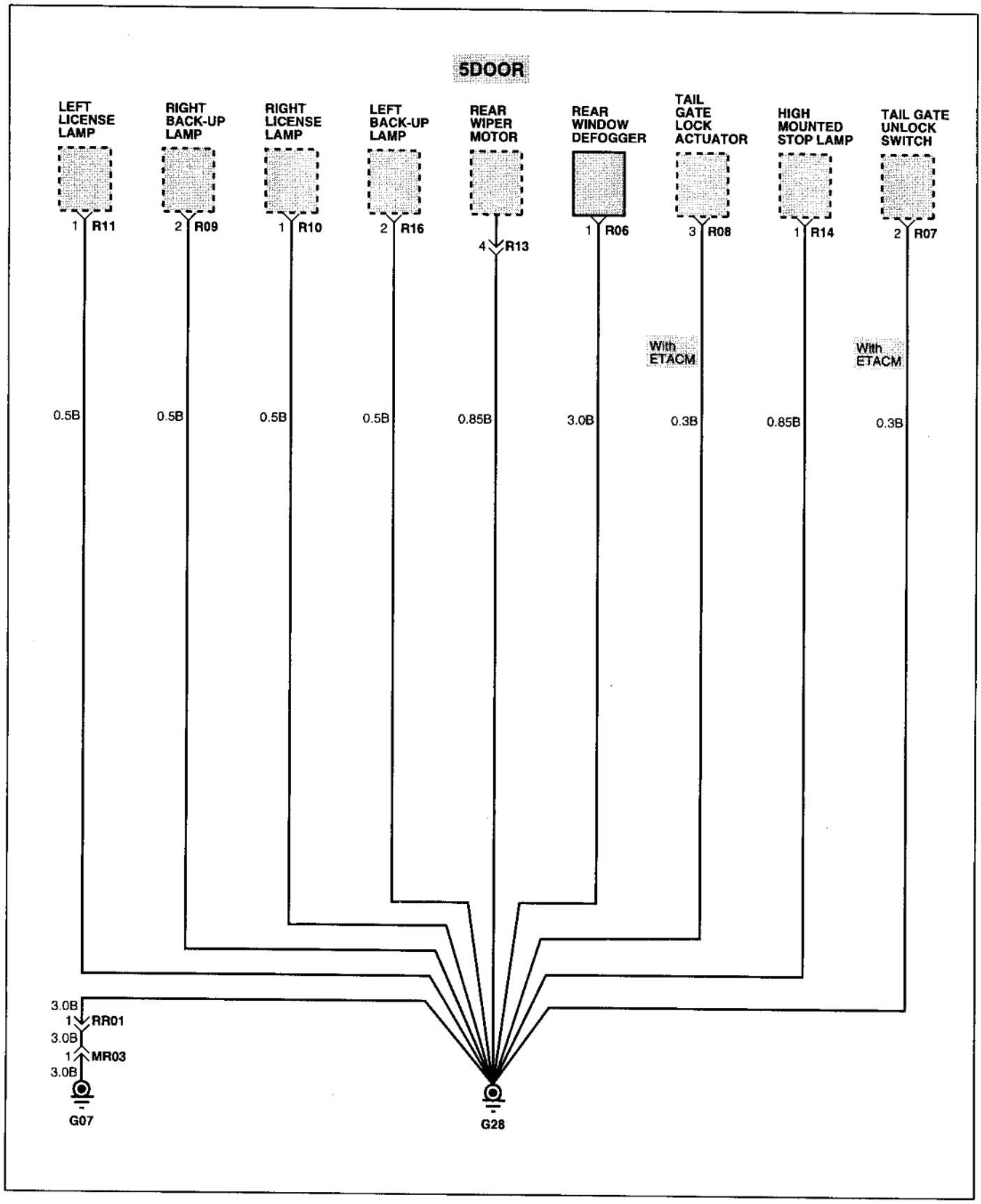
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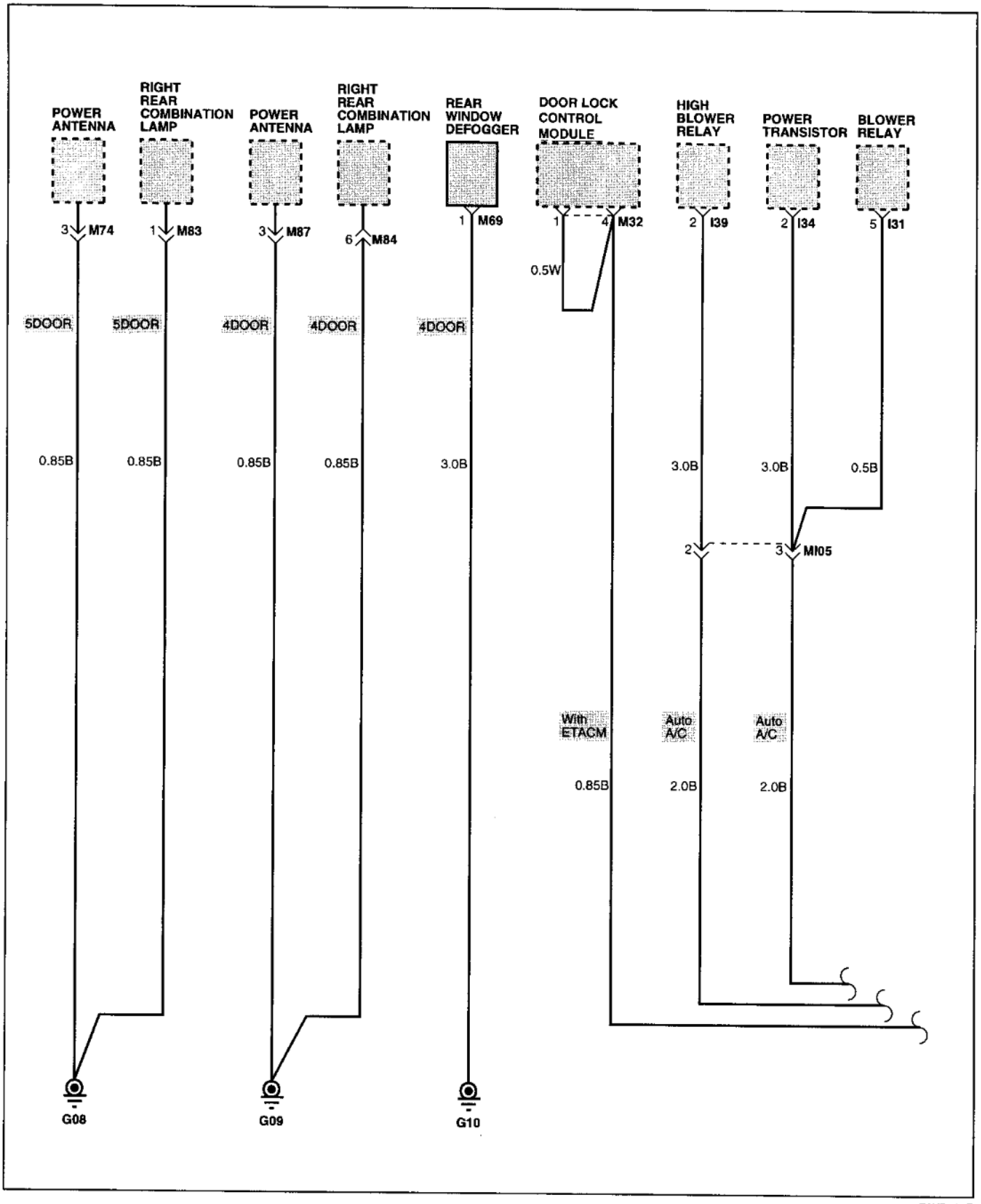
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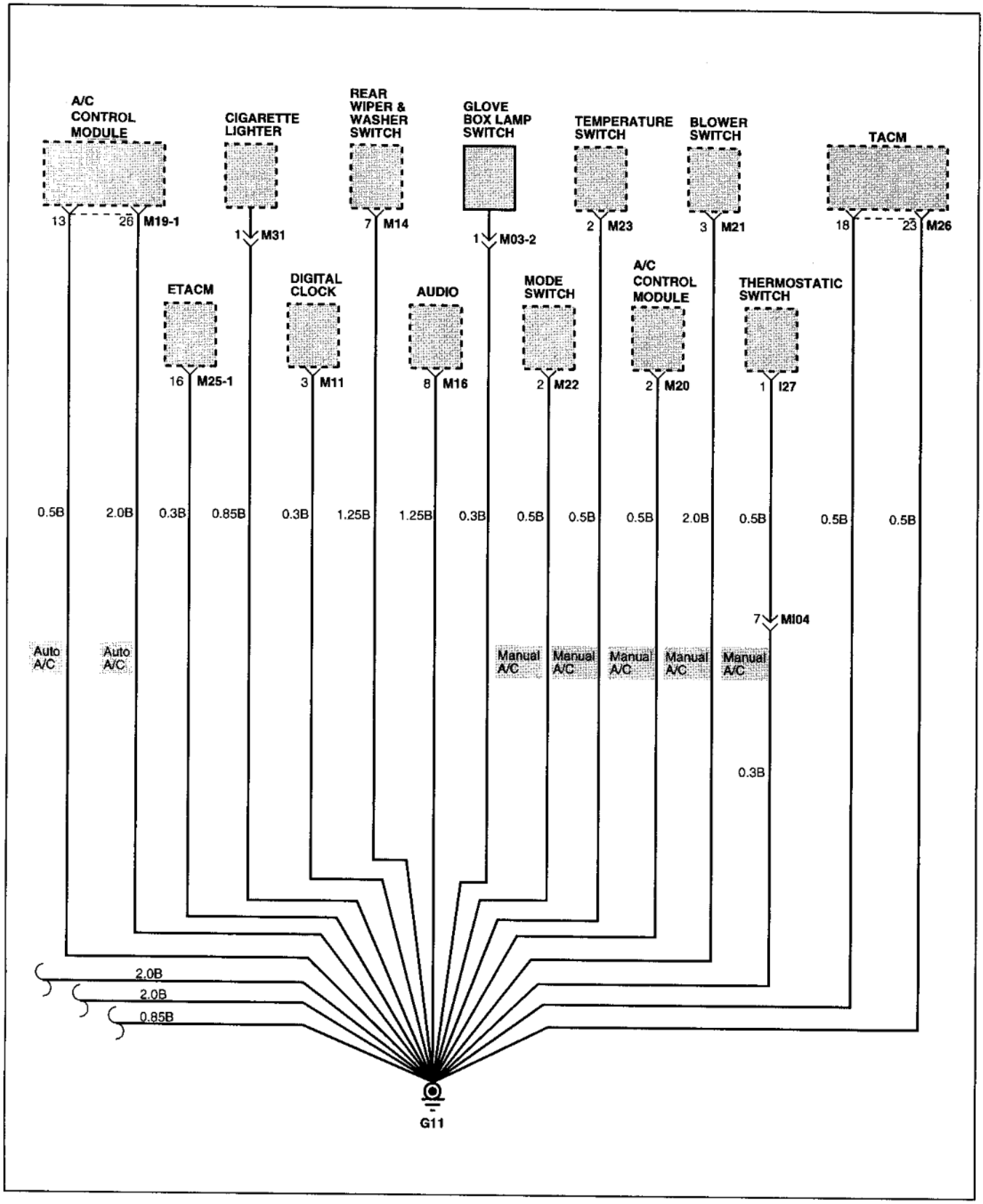
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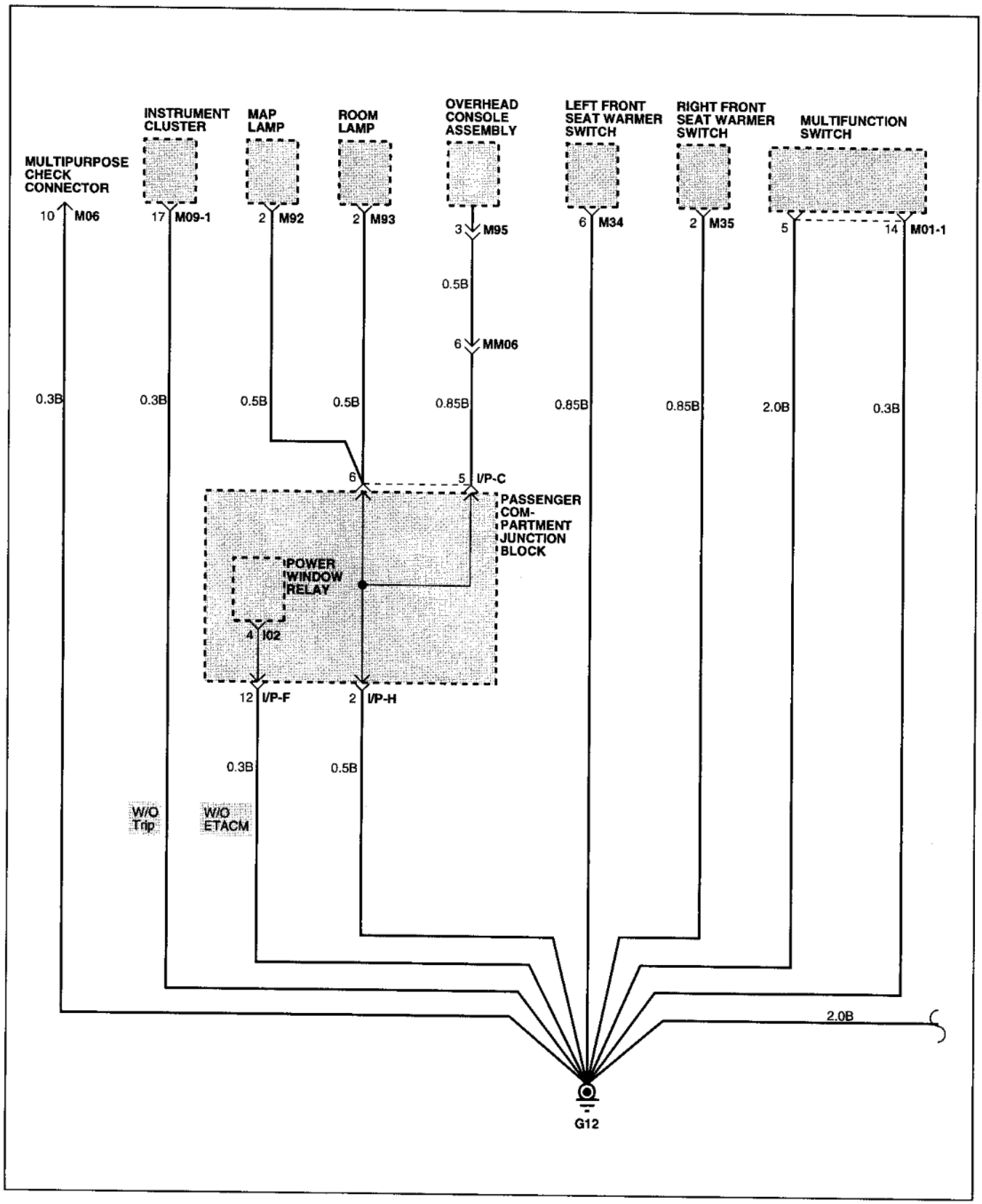
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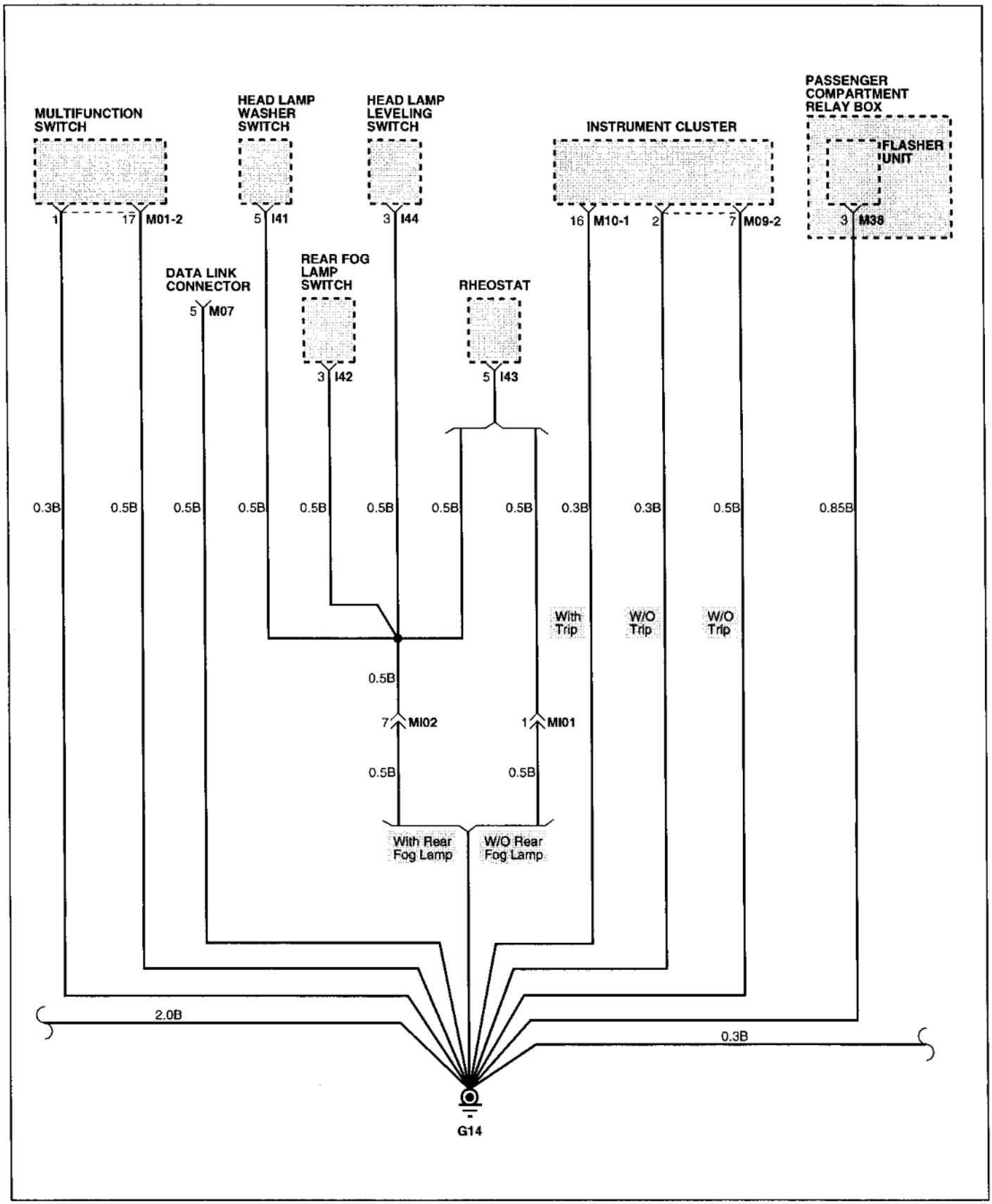
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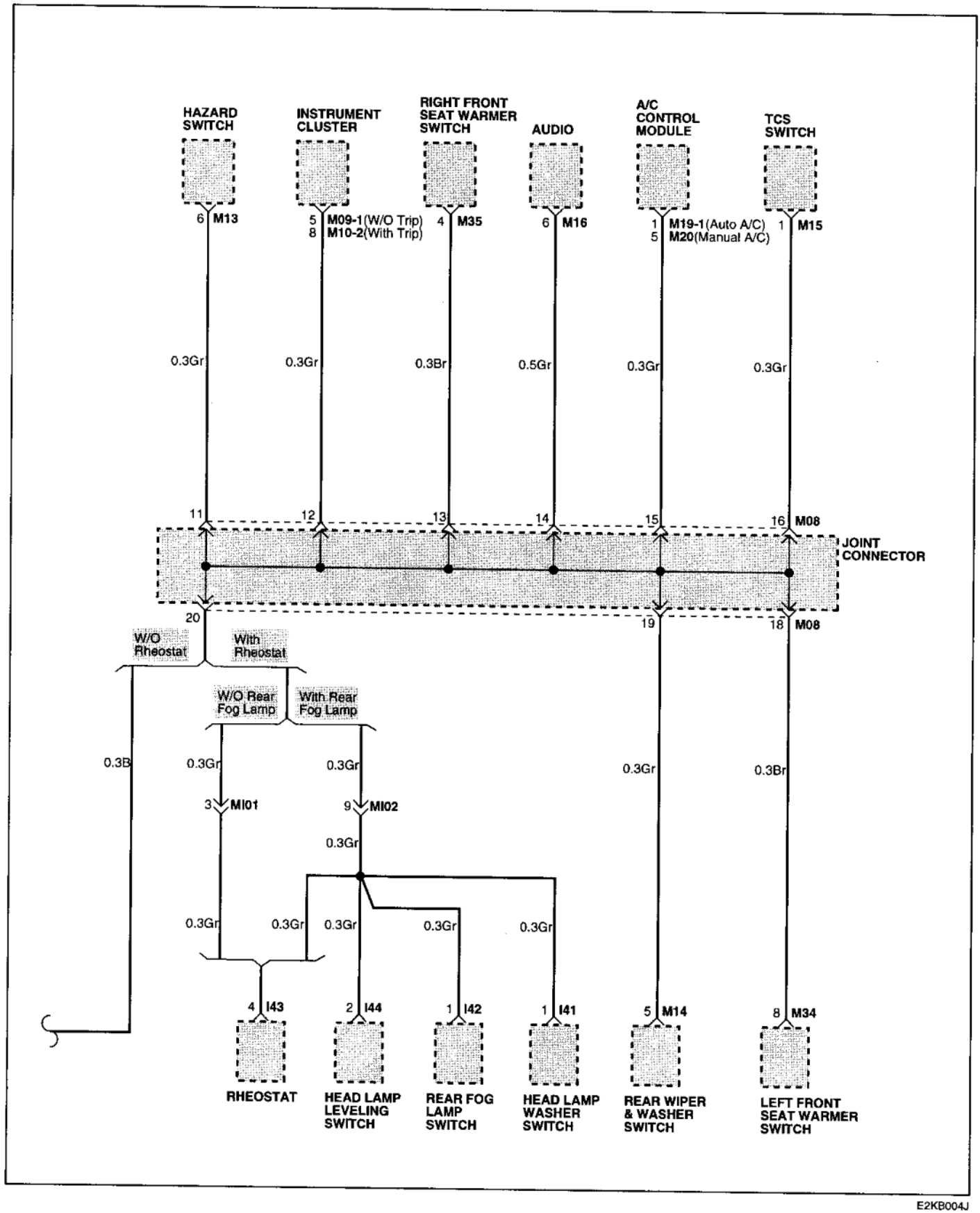
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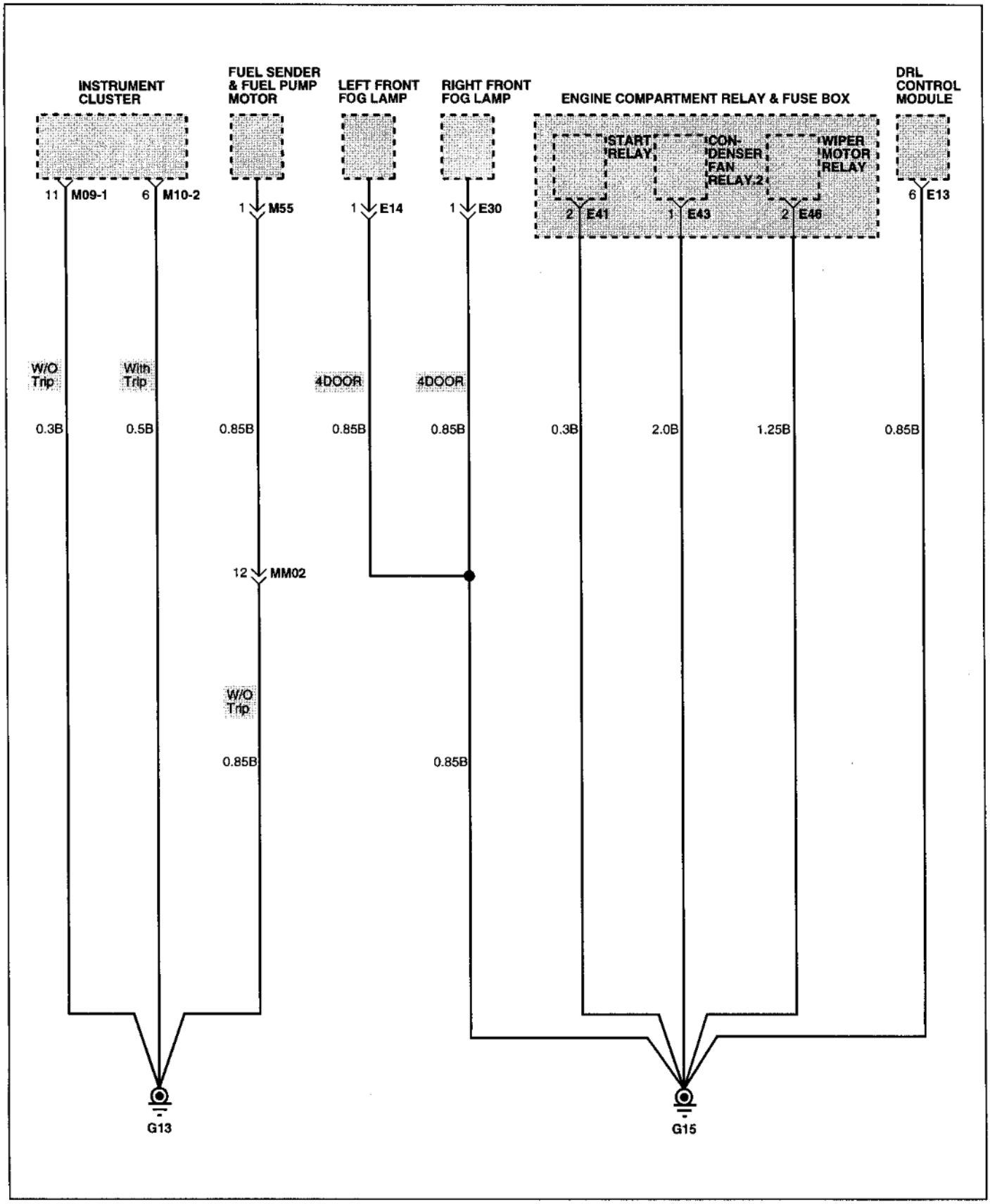
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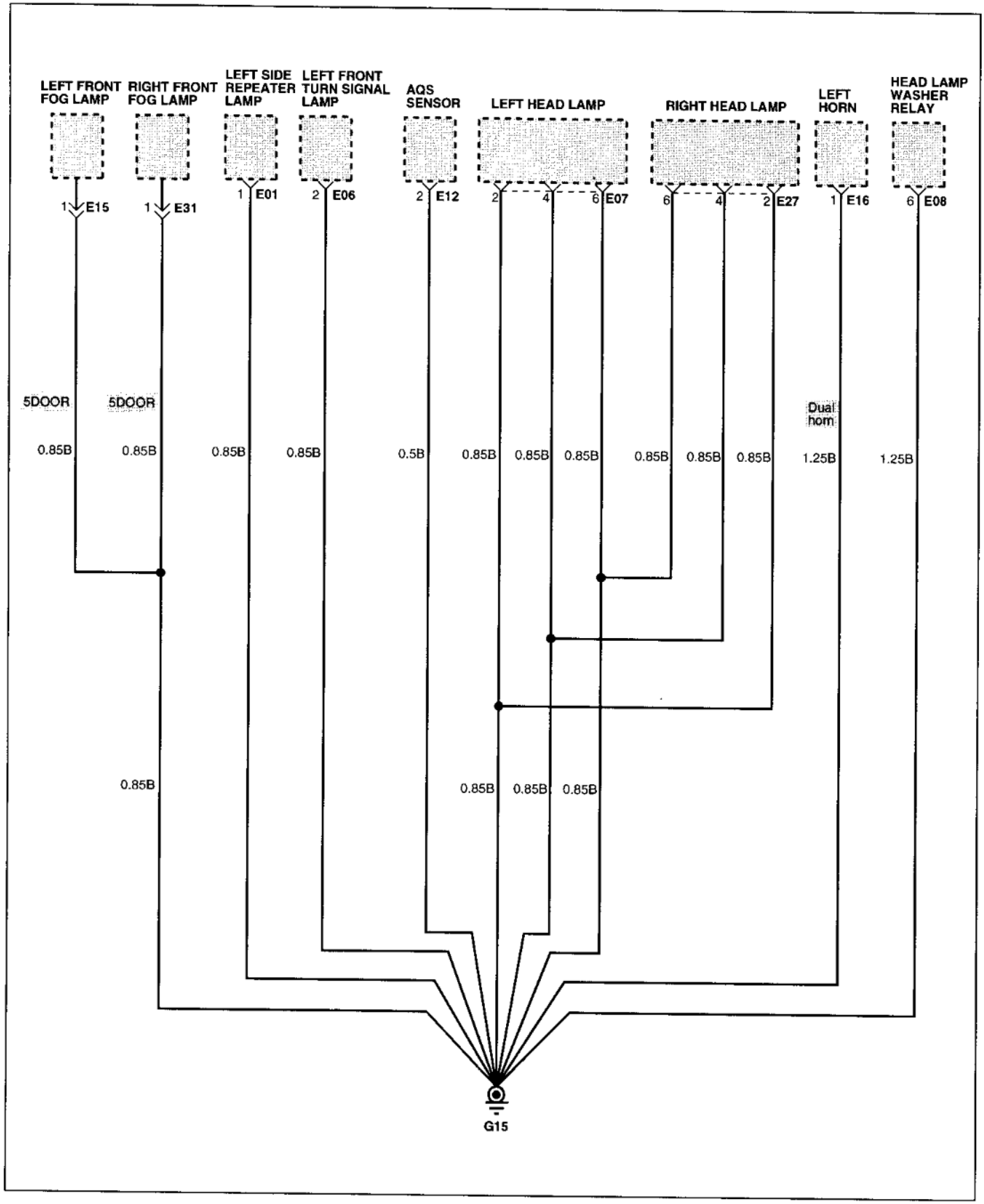
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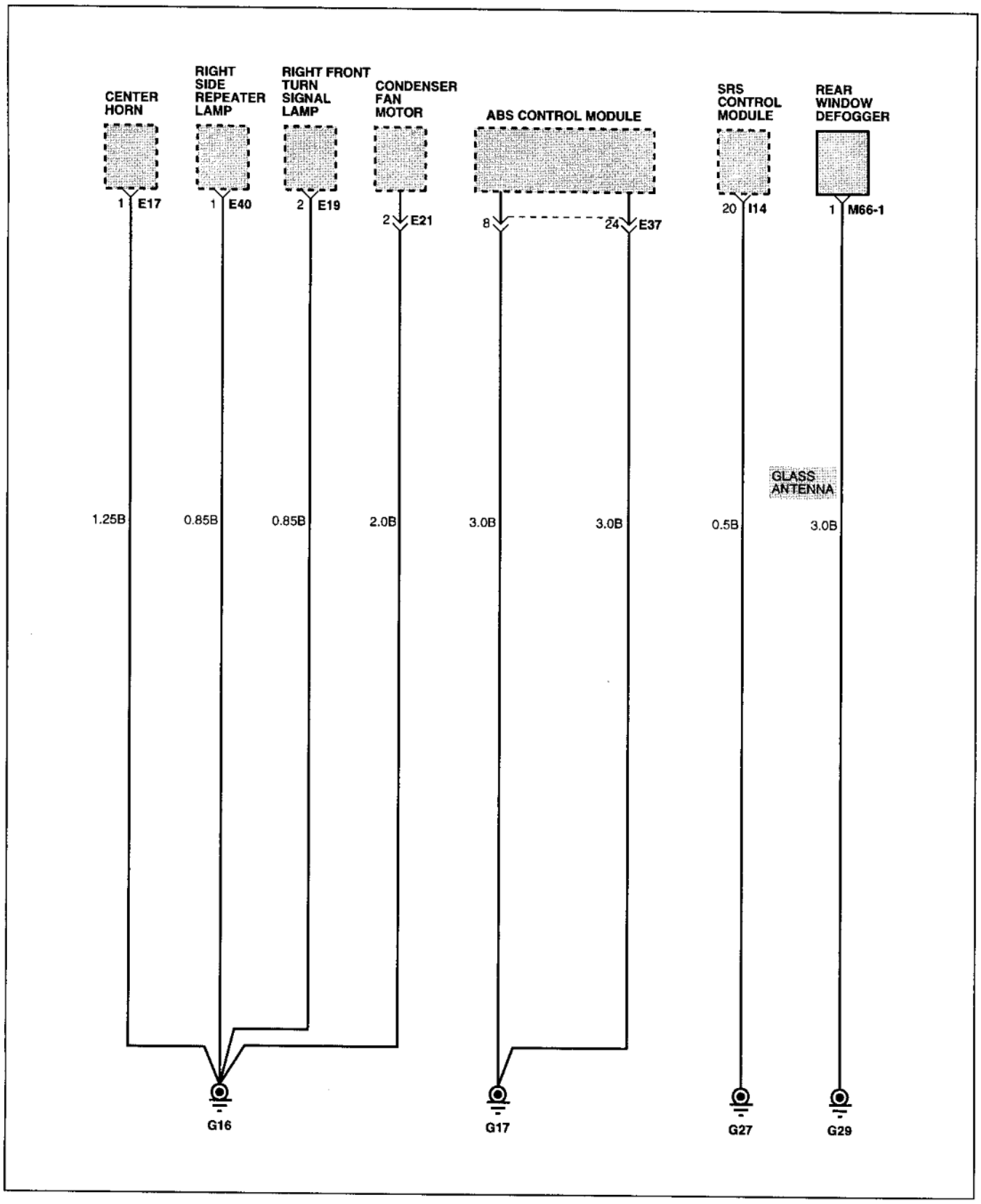
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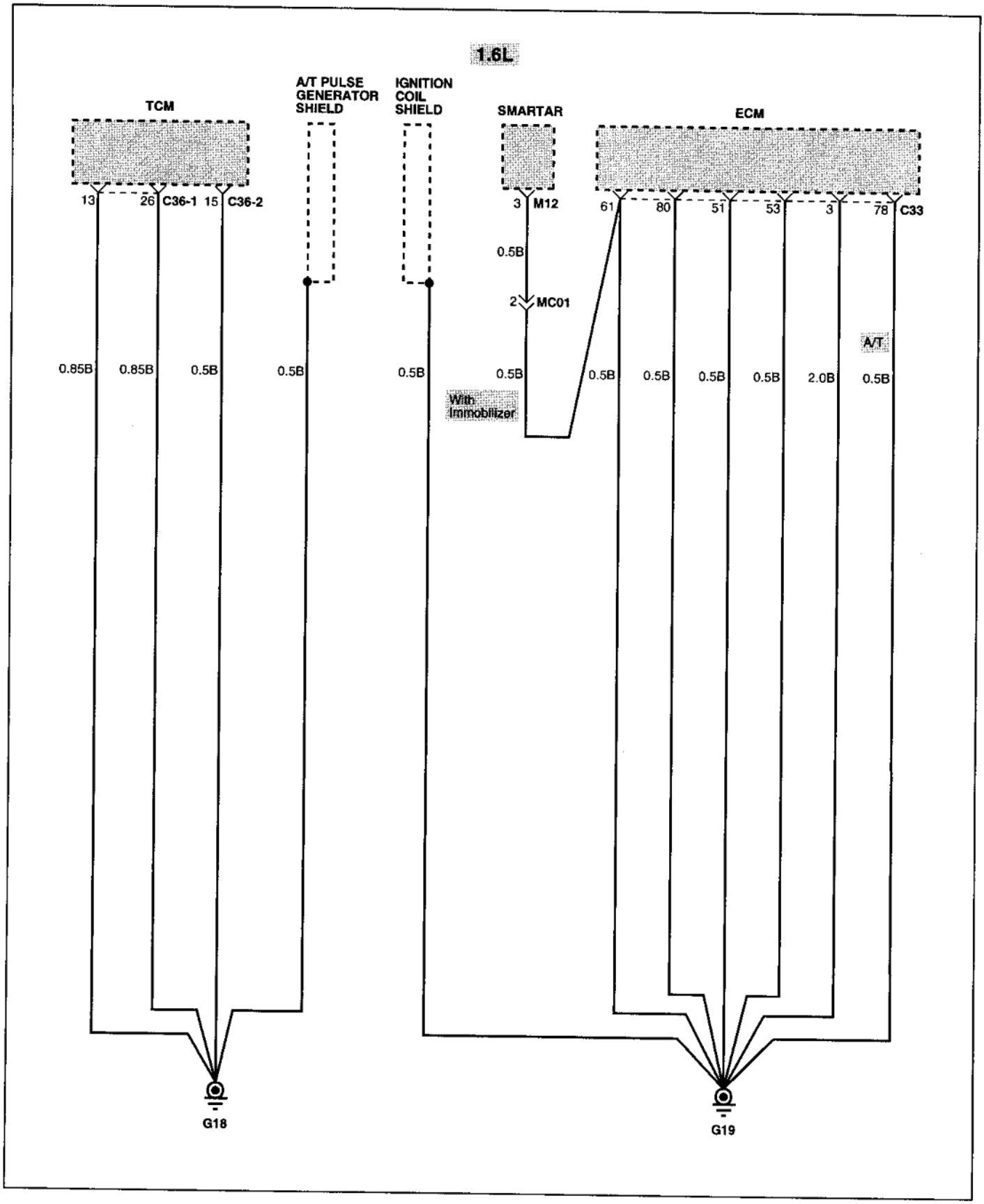
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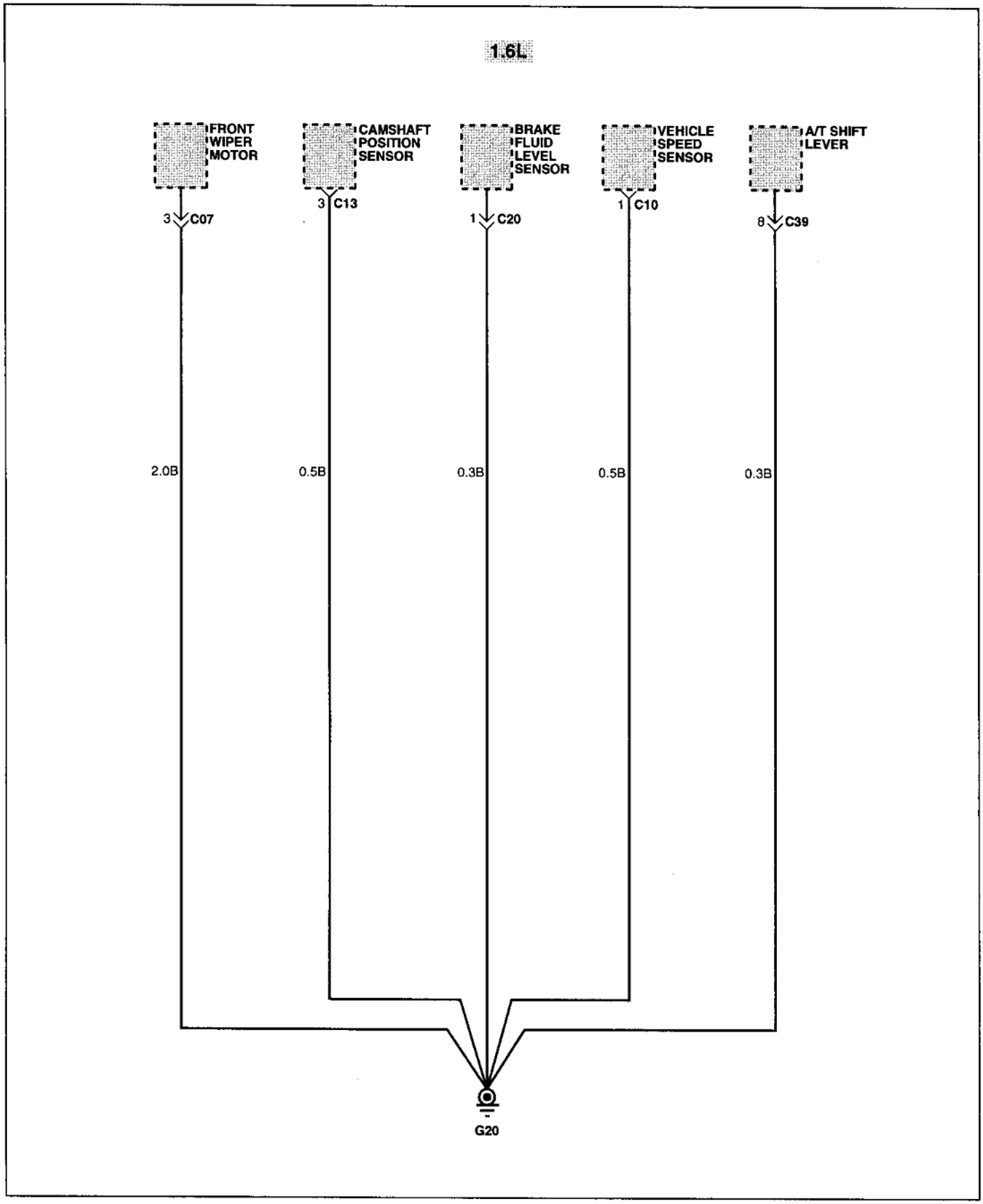
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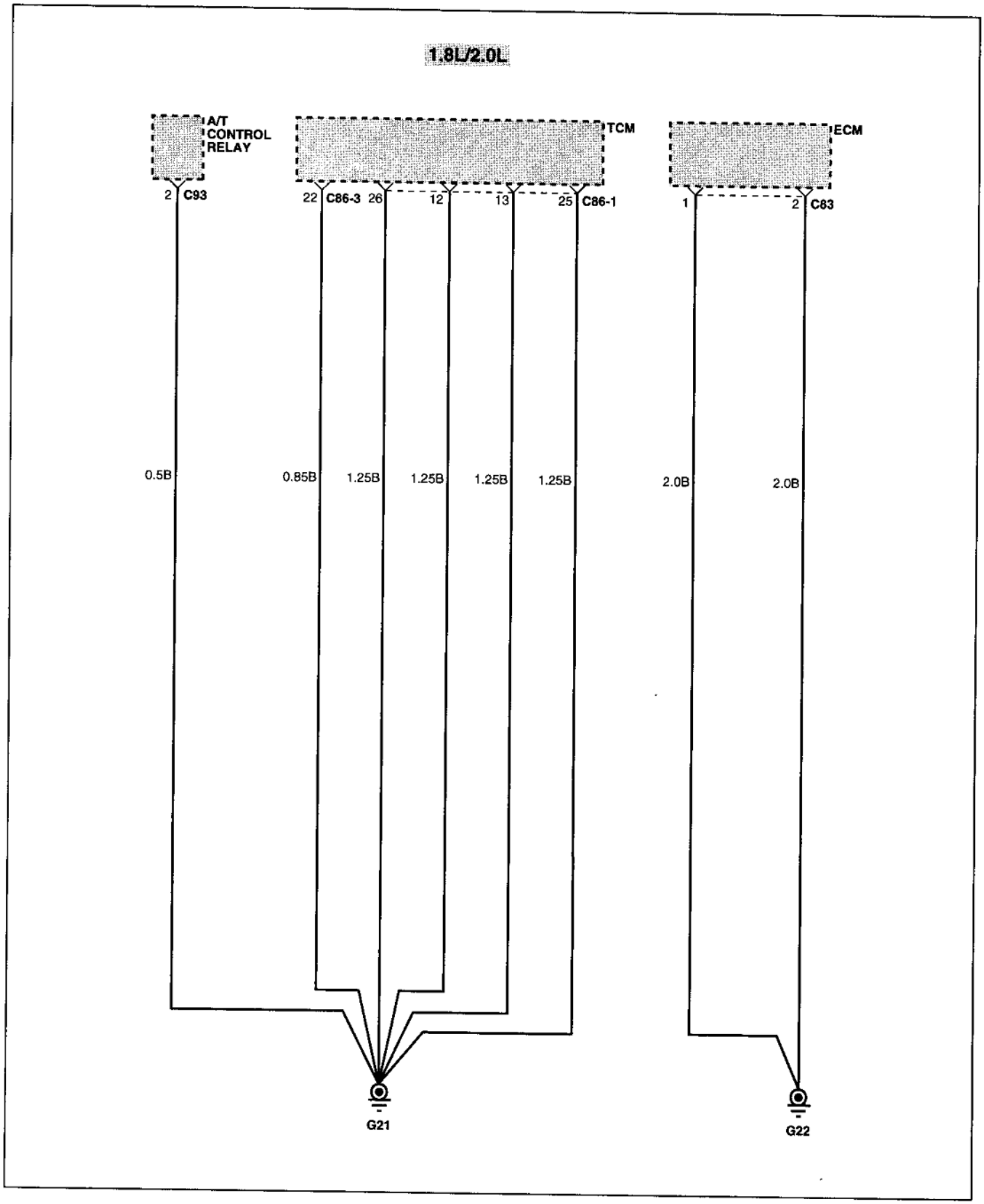
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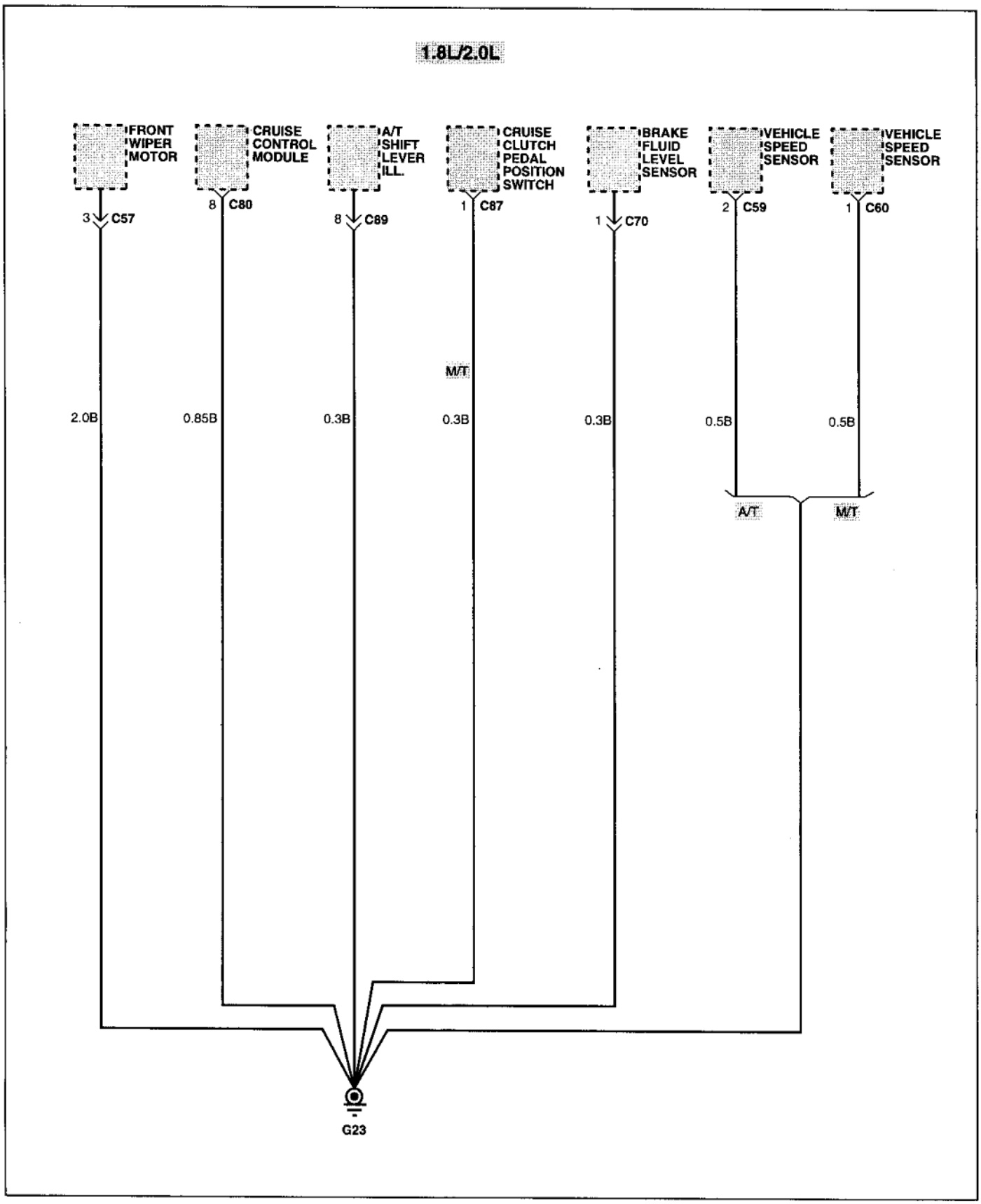
GROUND DISTRIBUTION (15)



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GROUND DISTRIBUTION (16)



E2KB004R

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C07	Front wiper motor (1.6L)	CL-16
C10	Vehicle speed sensor (1.6L)	CL-16
C13	Camshaft position sensor (1.6L)	CL-16
C20	Brake fluid level sensor (1.6L)	CL-17
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C36–2	TCM (1.6L)	CL-18
C39	A/T shift lever (1.6L)	CL-18
C57	Front wiper motor (1.8L/2.0L)	CL-19
C59	Vehicle speed sensor (A/T) (1.8L/2.0L)	CL-19
C60	Vehicle speed sensor (M/T) (1.8L/2.0L)	CL-19
C70	Brake fluid level sensor (1.8L/2.0L)	CL-20
C80	Cruise control module (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
C86–1	TCM (1.8L/2.0L)	CL-21
C86–3	TCM (1.8L/2.0L)	CL-21
C87	Cruise clutch pedal position sensor (M/T) (1.8L/2.0L)	CL-21
C89	A/T shift lever ILL.	CL-21
D04	Power outside mirror switch	CL-23
D05	Power window main switch	CL-23
D06	Left outside mirror motor & defogger	CL-23
D09	Left front door lock actuator (With ETACM)	CL-23
D10	Left front door lock actuator (W/O ETACM)	CL-23
D15	Right front power window switch	CL-23
D16	Right outside mirror motor & defogger	CL-23
D19	Right front door lock actuator	CL-23
D25	Left rear power window switch	CL-23
D29	Left rear door lock actuator	CL-23
D35	Right rear power window switch	CL-23
D39	Right rear door lock actuator	CL-23
E01	Left side repeater lamp	CL-10
E06	Left front turn signal lamp	CL-10
E07	Left head lamp	CL-10
E14	Left front fog lamp (4Door)	CL-10
E15	Left front fog lamp (5Door)	CL-10
E17	Center horn	CL-11
E19	Right front turn signal lamp	CL-11
E21	Condenser fan motor	CL-11
E30	Right front fog lamp (4Door)	CL-12

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COMPONENT LOCATION INDEX (2)

Components		Location reference-page
E31	Right front fog lamp (5Door)	CL-12
E32	Head lamp washer motor	CL-12
E37	ABS control module	CL-12
E40	Right side repeater lamp	CL-12
E41	Start relay	CL-12
E43	Condenser fan relay.2	CL-12
E46	Wiper motor relay	CL-12
I02	Power window relay	CL-14
I14	SRS control module	CL-14
I27	Thermostatic switch (Manual A/C)	CL-15
I31	Blower relay (Auto A/C)	CL-15
I34	Blower motor (Auto A/C)	CL-15
I39	High blower relay (Auto A/C)	CL-15
I41	Head lamp washer switch	CL-15
I42	Rear fog lamp switch	CL-15
I43	Rheostat	CL-15
I44	Head lamp leveling switch	CL-15
M01–1	Multifunction switch	CL-2
M01–2	Multifunction switch	CL-2
M03–2	Glove box lamp switch (-)	CL-2
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M08	Joint connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M11	Digital clock	CL-3
M13	Hazard switch	CL-3
M14	Rear wiper & washer switch	CL-3
M15	TCS switch	CL-3
M16	Audio	CL-3
M19–1	A/C control module (Auto A/C)	CL-3
M20	A/C control module (Manual A/C)	CL-3
M22	Mode switch (Manual A/C)	CL-3

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COMPONENT LOCATION INDEX (3)

Componentse		Location reference-page
M23	Temperature switch (Manual A/C)	CL-3
M25–1	ETACM	CL-3
M26	TACM	CL-3
M31	Cigarette lighter	CL-4
M32	Door lock control module (With ETACM)	CL-4
M38	Flasher unit	CL-4
M48	Seat belt switch	CL-5
M53	Left front door switch	CL-5
M54	Right front door switch	CL-5
M55	Fuel sender & Fuel pump motor	CL-5
M62	Right rear door switch	CL-6
M63	Left rear door switch	CL-6
M66–1	Rear window defogger (-)	CL-6
M69	Rear window defogger (-) (4Door)	CL-6
M72	High-mounted stop lamp (4Door)	CL-6
M82	Left rear combination lamp (4Door)	CL-7
M84	Right rear combination lamp (4Door)	CL-7
M87	Power antenna (4Door)	CL-7
M92	Map lamp	CL-7
M93	Room lamp	CL-7
M96	Overhead console assembly	CL-8
R01	Left license lamp (4Door)	CL-24
R02	Right license lamp (4Door)	CL-24
R03	Trunk unlock switch (4Door)	CL-24
R04	High-mounted stop lamp (spoiler) (4Door)	CL-24
Connectors		
I/P-C		CL-9
I/P-F		CL-9
I/P-H		CL-9
MC01		CL-8
MD01		CL-8
MD02		CL-8
MD03		CL-8
MD05		CL-8
MD06		CL-8
MI01		CL-8

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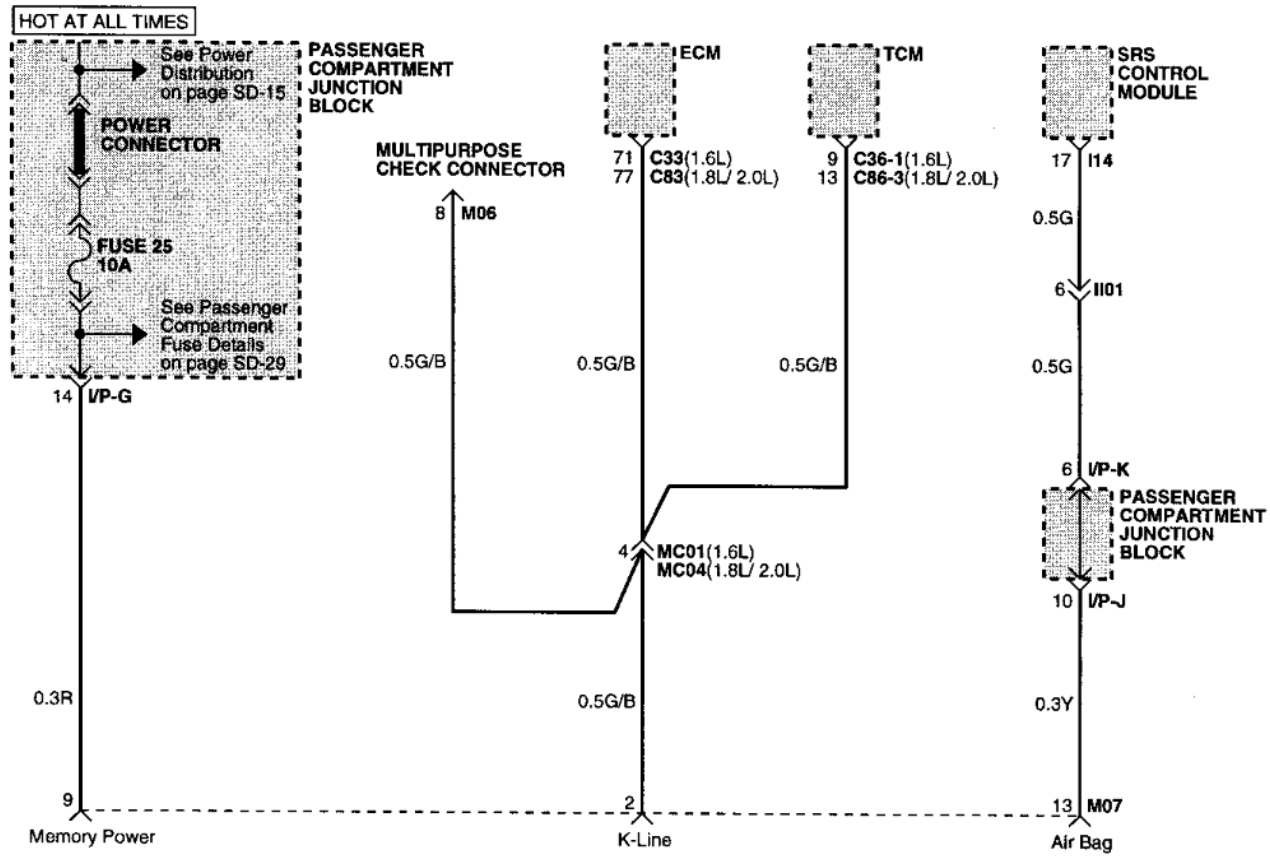
COMPONENT LOCATION INDEX (4)

Connectors	Location reference-page
MI02	CL-8
MI04	CL-9
MI05	CL-9
MM02	CL-9
MM06	CL-9
MR01	CL-9
Grounds	
G01	CL-25
G03	CL-25
G04	CL-25
G05	CL-25
G09	CL-25
G10	CL-25
G11	CL-25
G12	CL-26
G13	CL-26
G14	CL-26
G15	CL-26
G16	CL-26
G17	CL-26
G18	CL-26
G19	CL-26
G20	CL-26
G21	CL-27
G22	CL-27
G23	CL-27
G27	CL-27
G29	CL-27

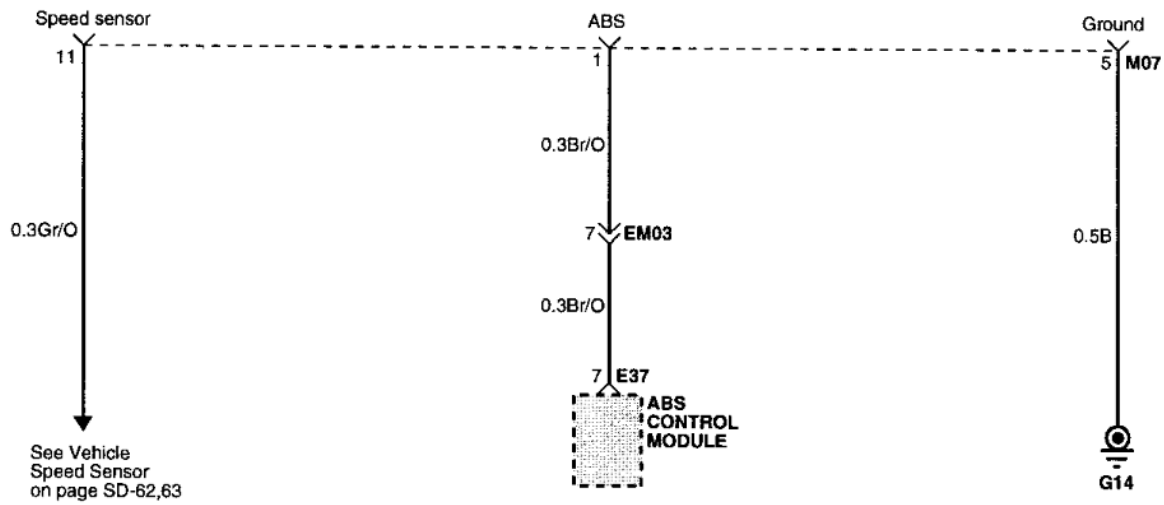
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DATA LINK DETAILS E2KB0050

DATA LINK CONNECTOR



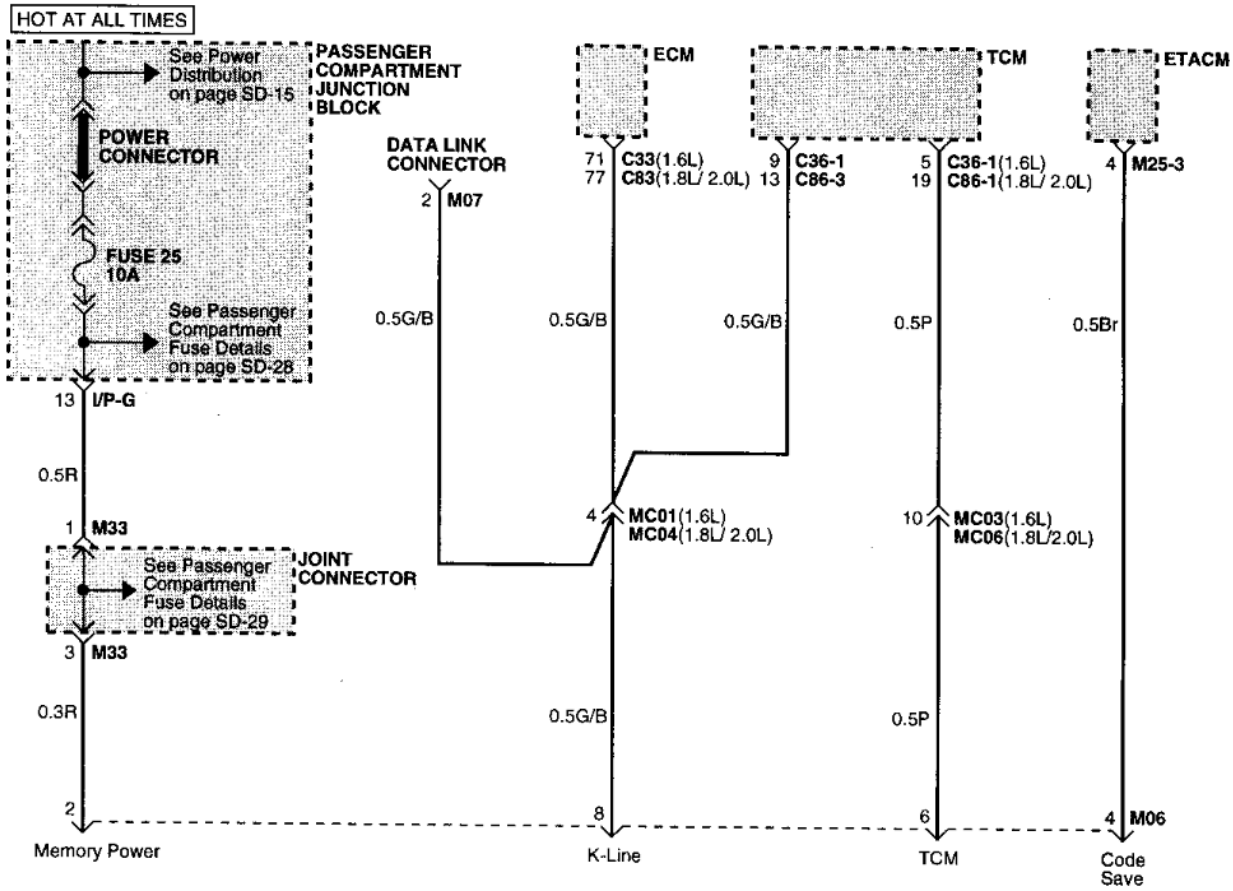
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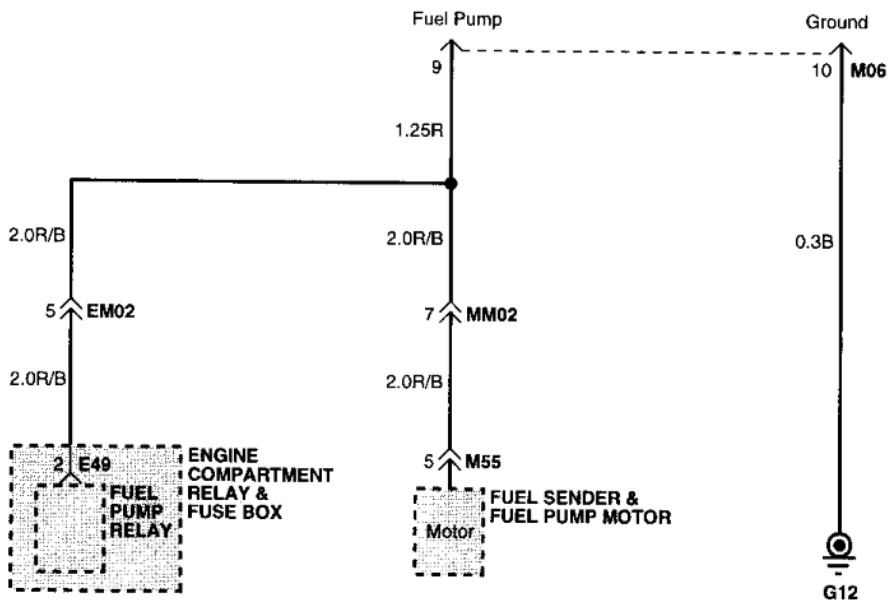
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MULTIPURPOSE CHECK CONNECTOR



MULTIPURPOSE CHECK CONNECTOR



E2KB005B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C83	ECM (1.8L/2.0L)	CL-21
C86–1	TCM (1.8L/2.0L)	CL-21
C86–2	TCM (1.8L/2.0L)	CL-21
E37	ABS control module	CL-12
E49	Fuel pump relay	CL-12
I14	SRS control module	CL-14
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M25–3	ETACM	CL-3
M33	Joint connector	CL-4
M55	Fuel sender & Fuel pump motor	CL-5
Connectors		
EM02		CL-13
EM03		CL-13
II01		CL-15
I/P-G		CL-9
I/P-J		CL-9
I/P-K		CL-9
MC01		CL-8
MC03		CL-8
MC04		CL-8
MC06		CL-8
MM02		CL-9
Ground		
G12		CL-26
G14		CL-26

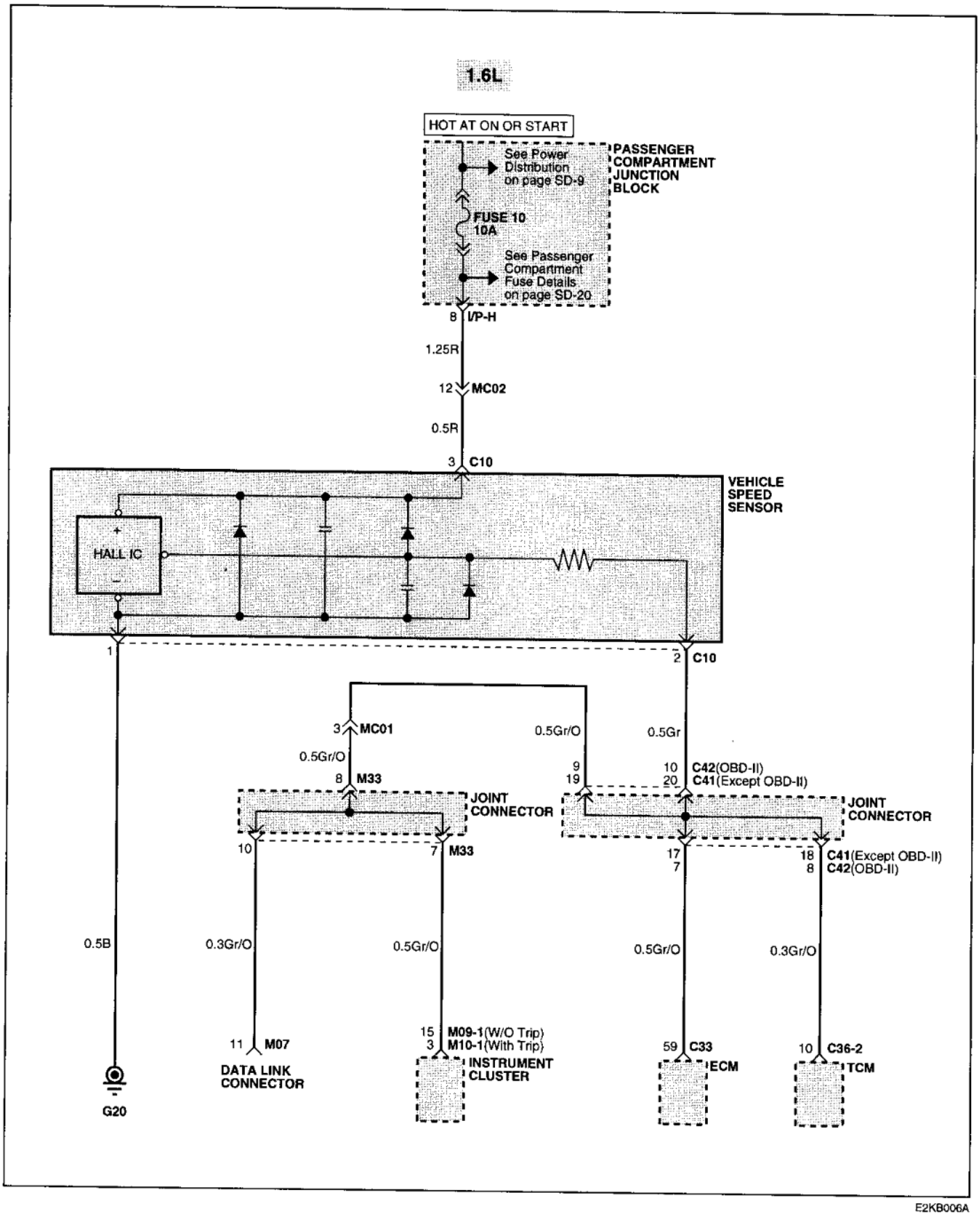
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VEHICLE SPEED SENSOR E2KB0060

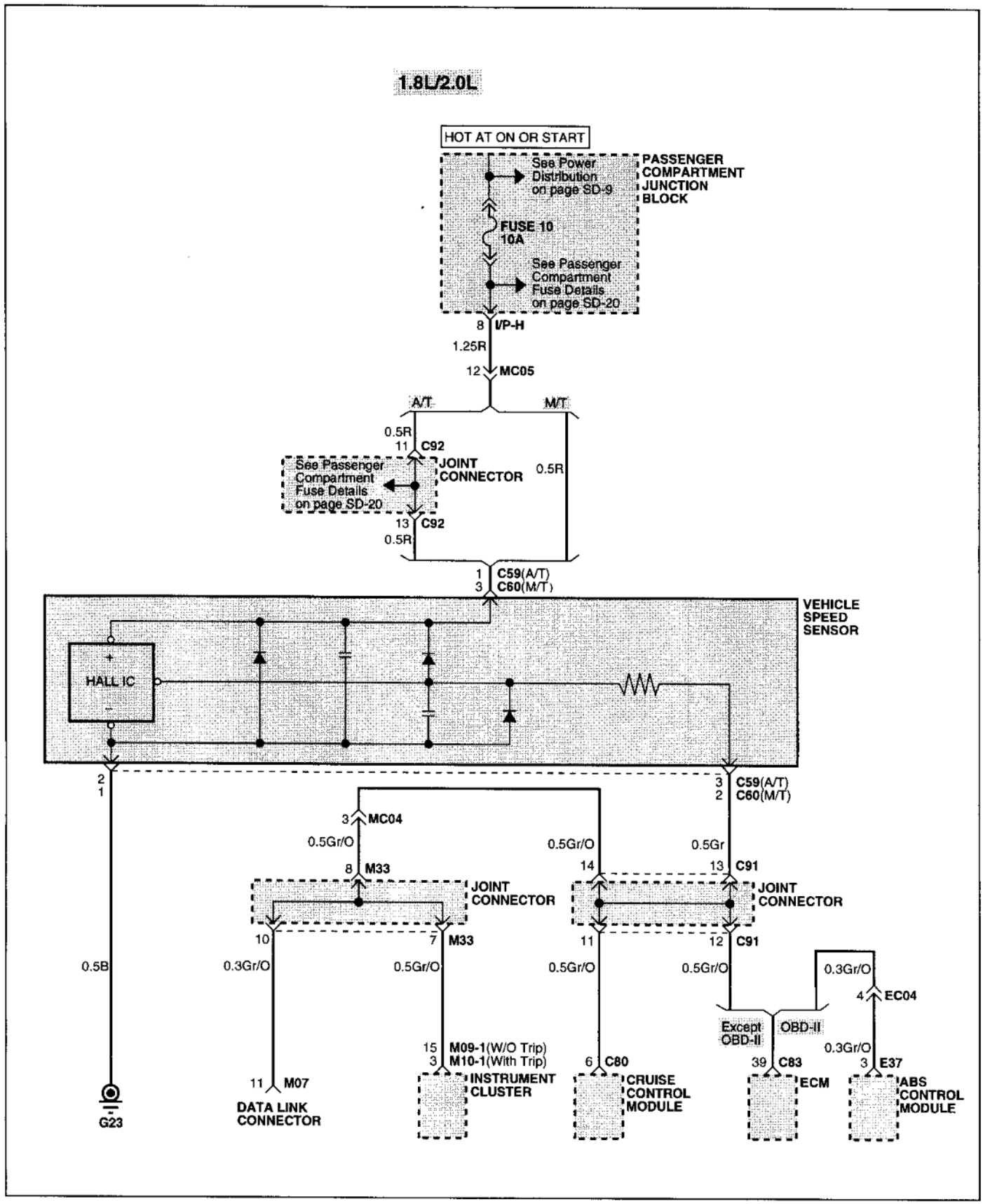
VEHICLE SPEED SENSOR (1)



E2KB006A

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VEHICLE SPEED SENSOR (2)



E2KB006B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C10	Vehicle speed sensor (1.6L)	CL-16
C33	ECM (1.6L)	CL-18
C36–2	TCM (1.6L)	CL-18
C41	Joint connector	CL-18
C42	Joint connector	CL-18
C59	Vehicle speed sensor (A/T) (1.8L/2.0L)	CL-19
C60	Vehicle speed sensor (M/T) (1.8L/2.0L)	CL-19
C80	Cruise control module (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
C91	Joint connector	CL-21
C92	Joint connector	CL-22
E37	ABS control module	CL-12
M07	Data link connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M33	Joint connector	CL-4
Connectors		
EC04		CL-13
I/P-H		CL-9
MC01		CL-8
MC02		CL-8
MC04		CL-8
MC05		CL-8
Grounds		
G20		CL-26
G23		CL-27

Circuit Description

The vehicle speed sensor, located on the speedometer driven gear in the transaxle, generates pulse signals that indicate the vehicle's speed and provides signals to the control modules to calcaulate the vehicle speed.

The vehicle speed sensor (VSS) intermittently grounds the circuits. The number of pulses per minute increase/ decrease with the speed of the car.

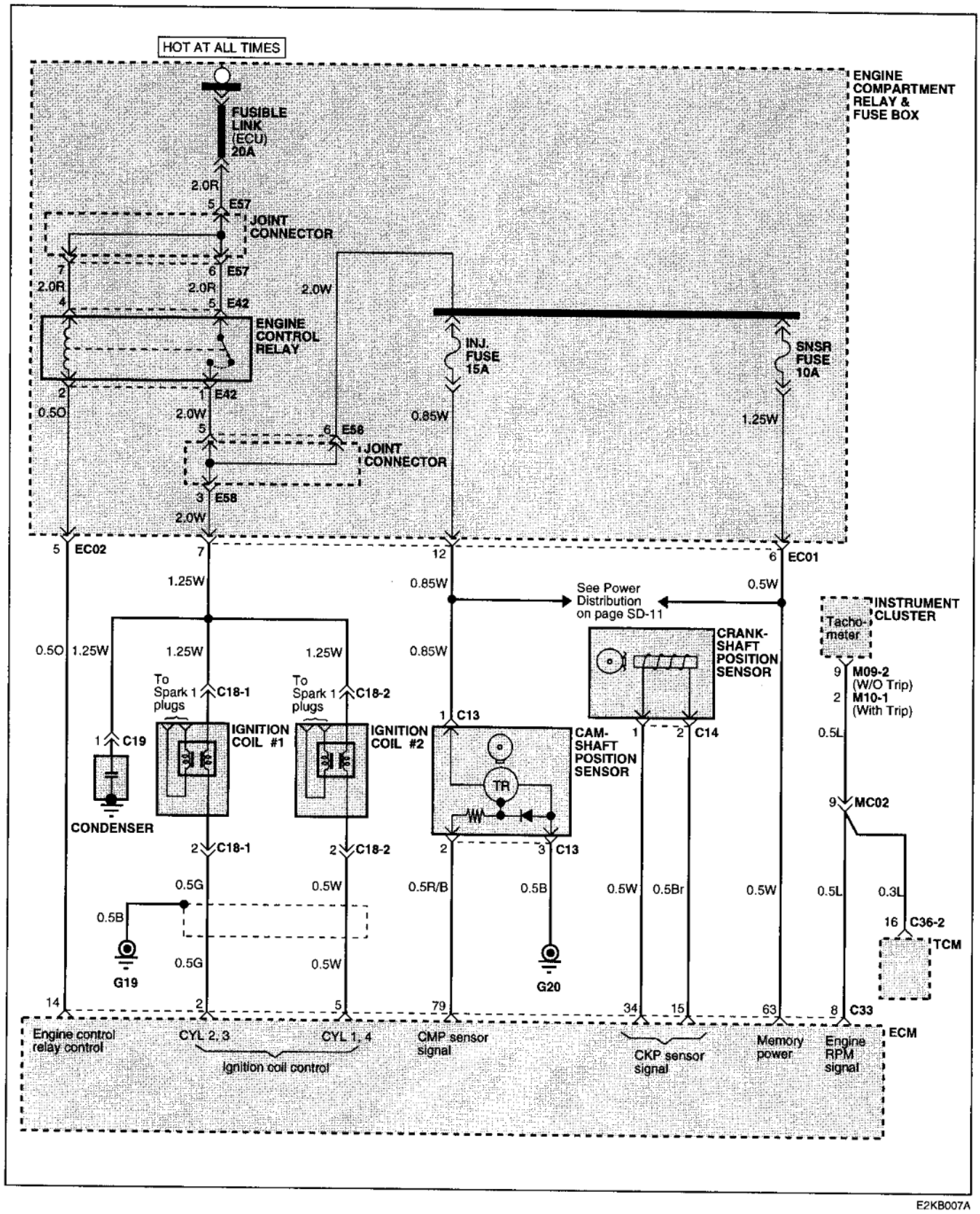
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IGNITION SYSTEM (1.6L) E2KB0070

IGNITION SYSTEM (1.6L) (1)



E2KB007A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C13	Camshaft position sensor	CL-16
C14	Crankshaft position sensor	CL-17
C18–1	Ignition coil #1	CL-17
C18–2	Ignition coil #2	CL-17
C19	Condenser	CL-17
C33	ECM	CL-18
C36–2	TCM	CL-18
E42	Engine control relay	CL-12
E57	Joint connector	CL-12
E58	Joint connector	CL-12
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
Connectors		
EC01		CL-13
EC02		CL-13
MC02		CL-8
Grounds		
G19		CL-26
G20		CL-26

Circuit Description

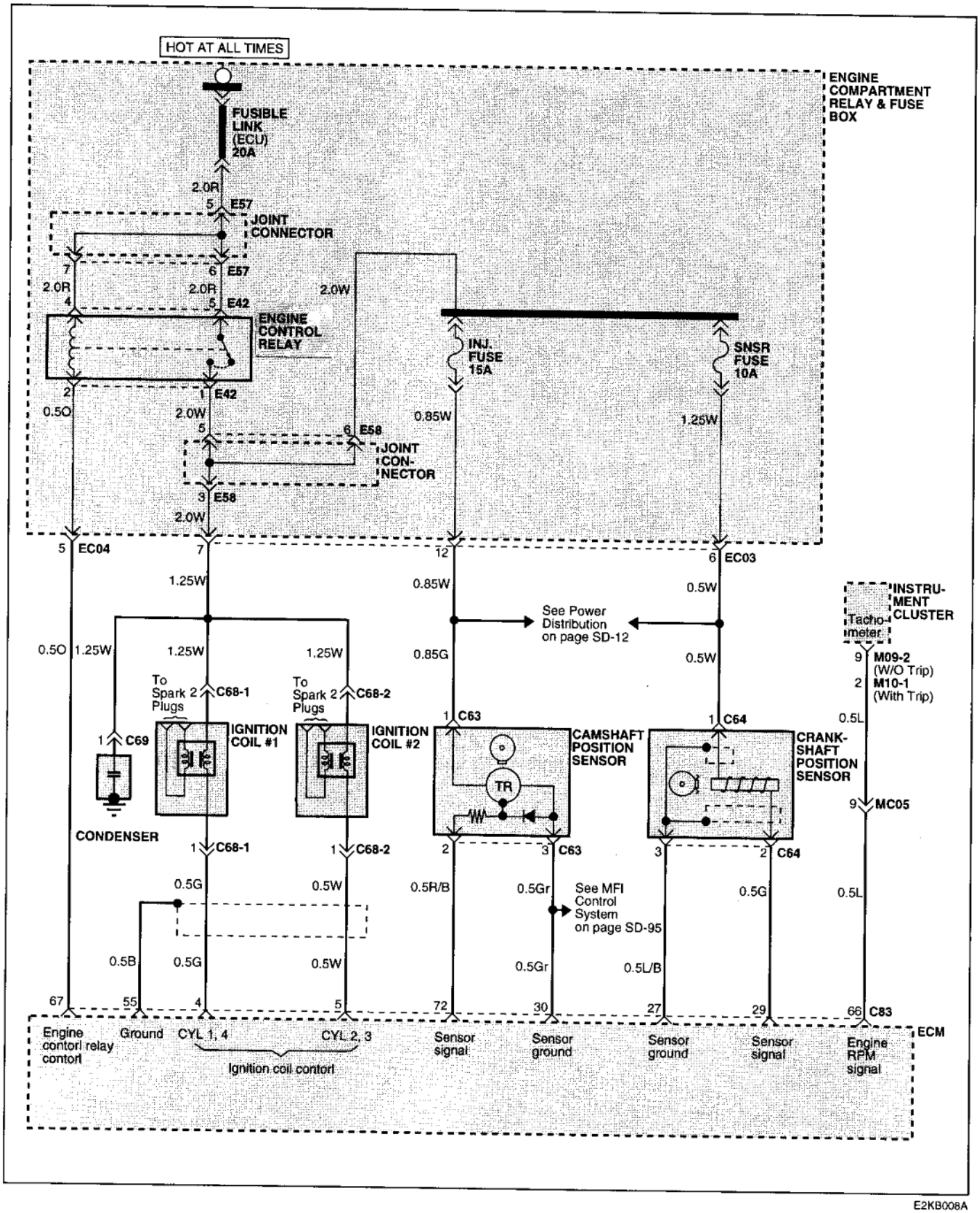
As the crankshaft turns, the engine control module (ECM) receives the signals from the CKP and CMP sensors. Based on these signals from the ECM controls the engine control relay coil and and then battery voltage is applied to the ignition coils through the engine control relay contact. The ECM controls the current through the ignition coil by turning the power transistor(built into the ECM) on and off.

When current flow through the primary windings, is stopped (at the moment the power transistor turns off), high voltage is induced in the secondary windings of the ignition coil. The high voltage is applied to the two spark plugs that are connected in series.

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IGNITION SYSTEM (1.8L/2.0L) E2KB0080

IGNITION SYSTEM (1.8L/2.0L) (1)



E2KB008A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C63	Camshaft position sensor	CL-19
C64	Crankshaft position sensor	CL-20
C68–1	Ignition coil #1	CL-20
C68–2	Ignition coil #2	CL-20
C69	Condenser	CL-20
C83	ECM	CL-21
E42	Engine control relay	CL-12
E57	Joint connector	CL-12
E58	Joint connector	CL-12
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
Connectors		
EC03		CL-13
EC04		CL-13
MC05		CL-8

Circuit Description

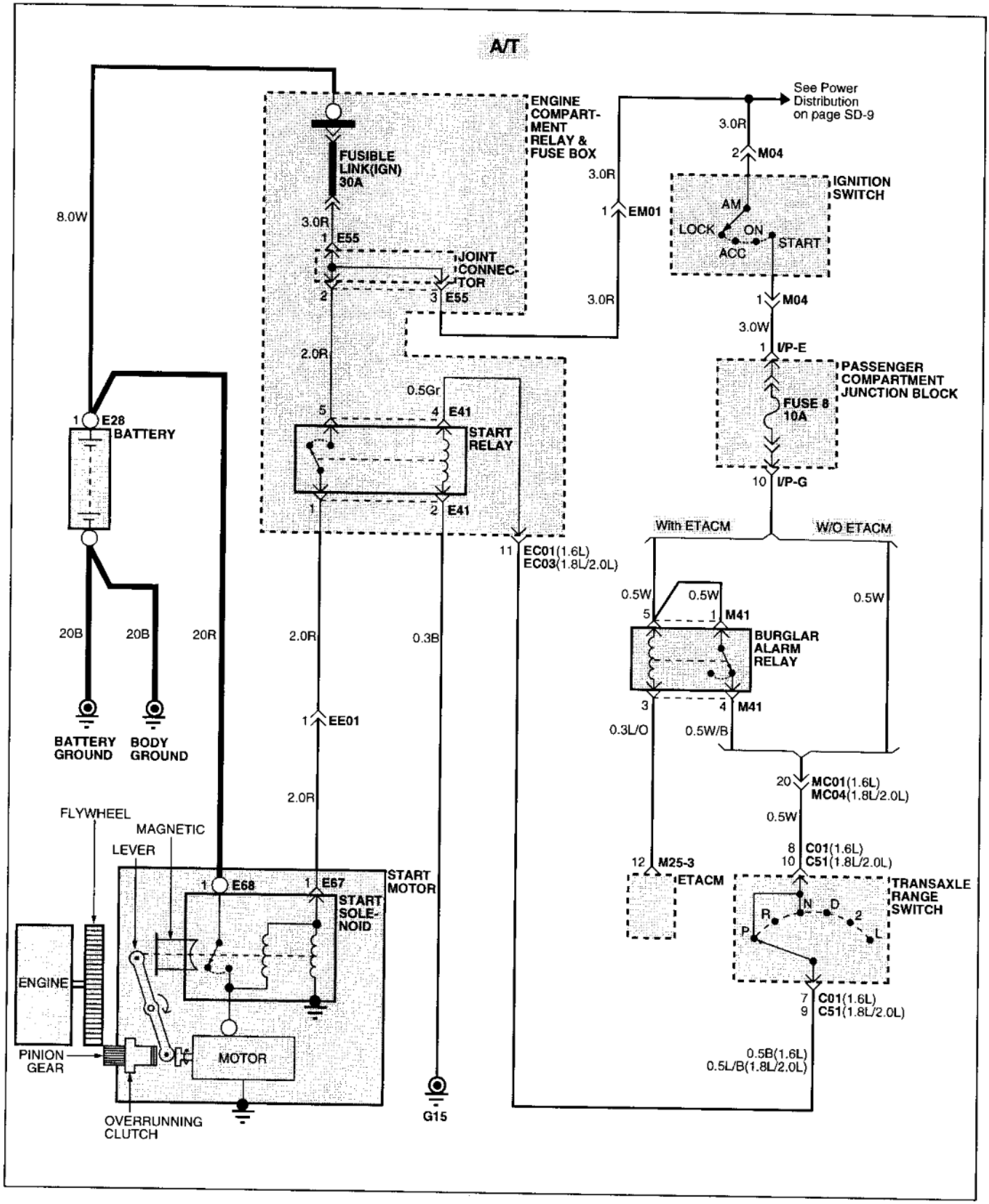
As the crankshaft turns, the engine control module (ECM) receives the signals from the CKP and CMP sensors. Based on these signals from the ECM controls the engine control relay coil and and then battery voltage is applied to the ignition coils through the engine control relay contact. The ECM controls the current through the ignition coil by turning the power transistor(built into the ECM) on and off.

When current flow through the primary windings, is stopped (at the moment the power transistor turns off), high voltage is induced in the secondary windings of the ignition coil. The high voltage is applied to the two spark plugs that are connected in series.

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STARTING SYSTEM E2KB0090

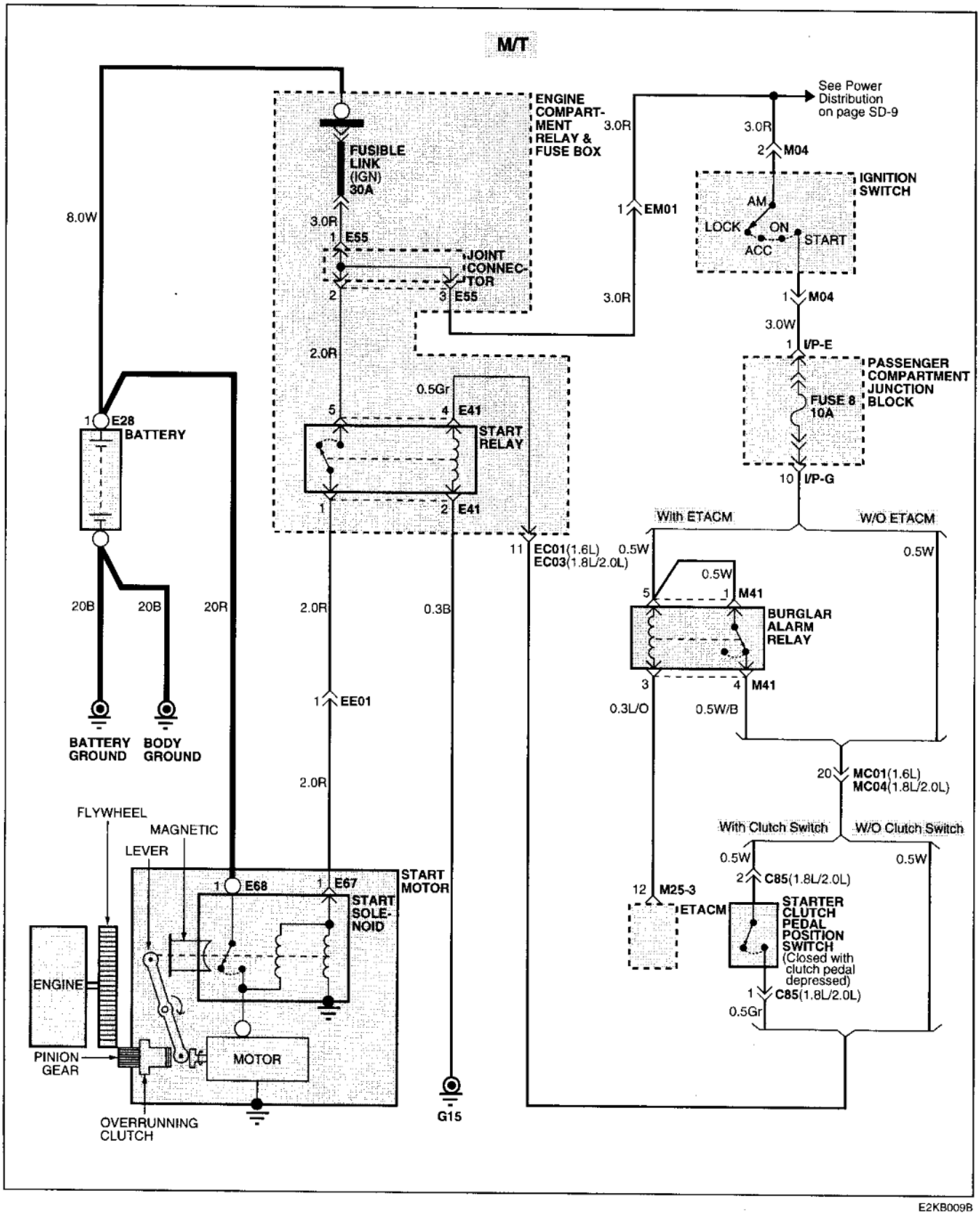
STARTING SYSTEM (1)



E2KB009A

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STARTING SYSTEM (2)



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E2KB009B

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch (1.6L)	CL-16
C51	Transaxle range switch (1.8L/2.0L)	CL-18
C85	Starter clutch pedal position switch (1.8L/2.0L)	CL-21
E41	Start relay	CL-12
E55	Joint connector	CL-12
E67	Start solenoid	CL-13
E68	Start motor	CL-13
M04	Ignition switch	CL-2
M25–3	ETACM	CL-3
M41	Burglar alarm relay	CL-5
Connectors		
EC01		CL-13
EC03		CL-13
EE01		CL-13
EM01		CL-13
I/P-E		CL-9
I/P-G		CL-9
MC01		CL-8
MC04		CL-8
Ground		
G15		CL-26

Circuit Description

Battery voltage is applied at all times, from the positive battery terminal, to the ignition switch and the normally open start relay contacts. When the ignition switch is turned to START, and the transaxle range switch (automatic transaxle) is in the P/N position or the starter clutch pedal position switch (Manual transaxle) is closed, battery voltage is applied through Fusible Link IGN to the starter relay coils, and then the coil is energized.

Battery voltage is applied to the starter solenoid through the start relay contacts and the starter motor engages to start the engine.

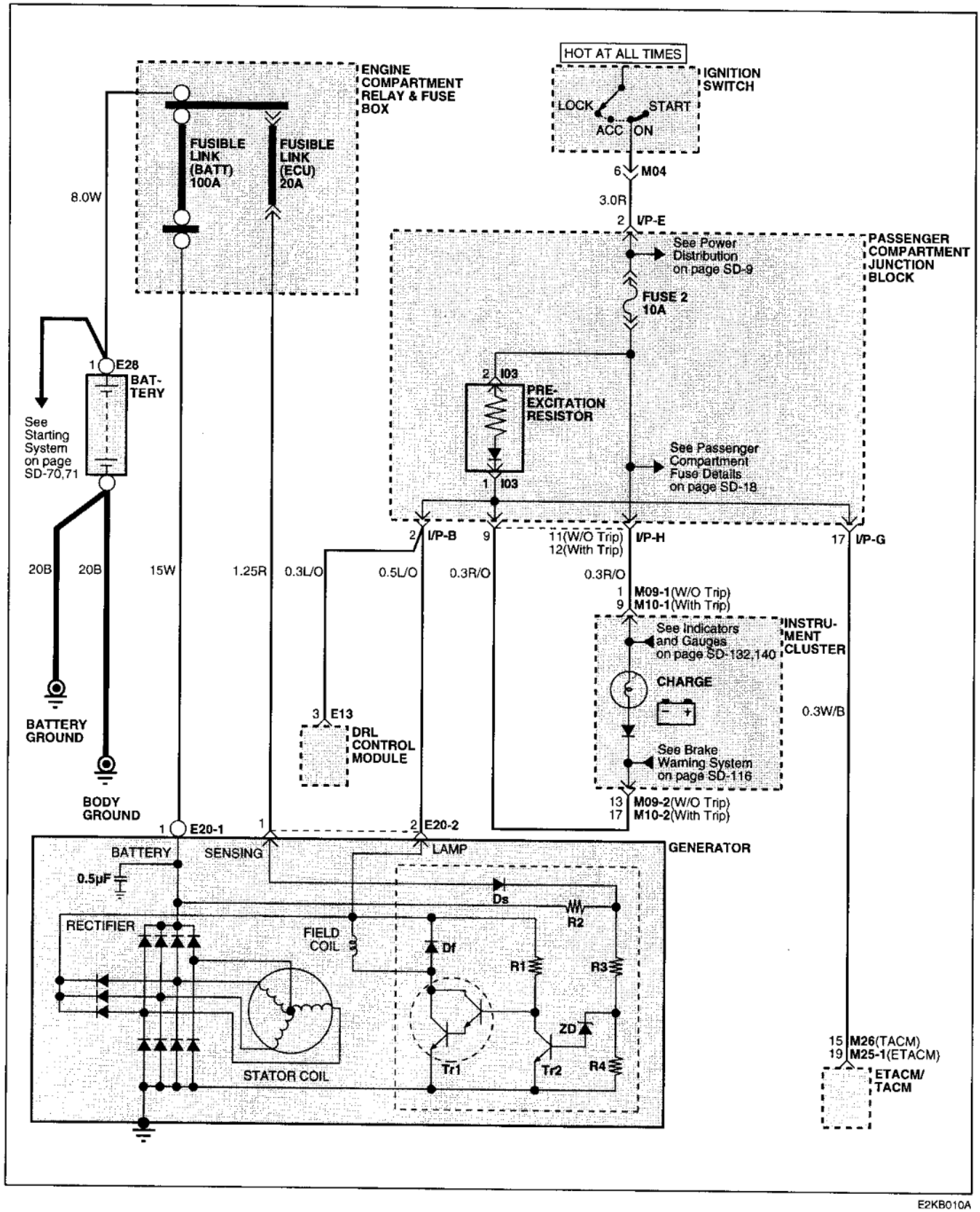
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MEMO

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CHARGING SYSTEM E2KB0100

CHARGING SYSTEM (1)



E2KB010A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E20–1	Generator (B+)	CL-11
E20–2	Generator (S,L)	CL-11
E28	Batter terminal (+)	CL-11
I03	Pre-excitation resistor	CL-14
M04	Ignition switch	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M25–1	ETACM	CL-3
M26	TACM	CL-3
Connectors		
I/P-B		CL-9
I/P-E		CL-9
I/P-G		CL-9
I/P-H		CL-9

Circuit Description

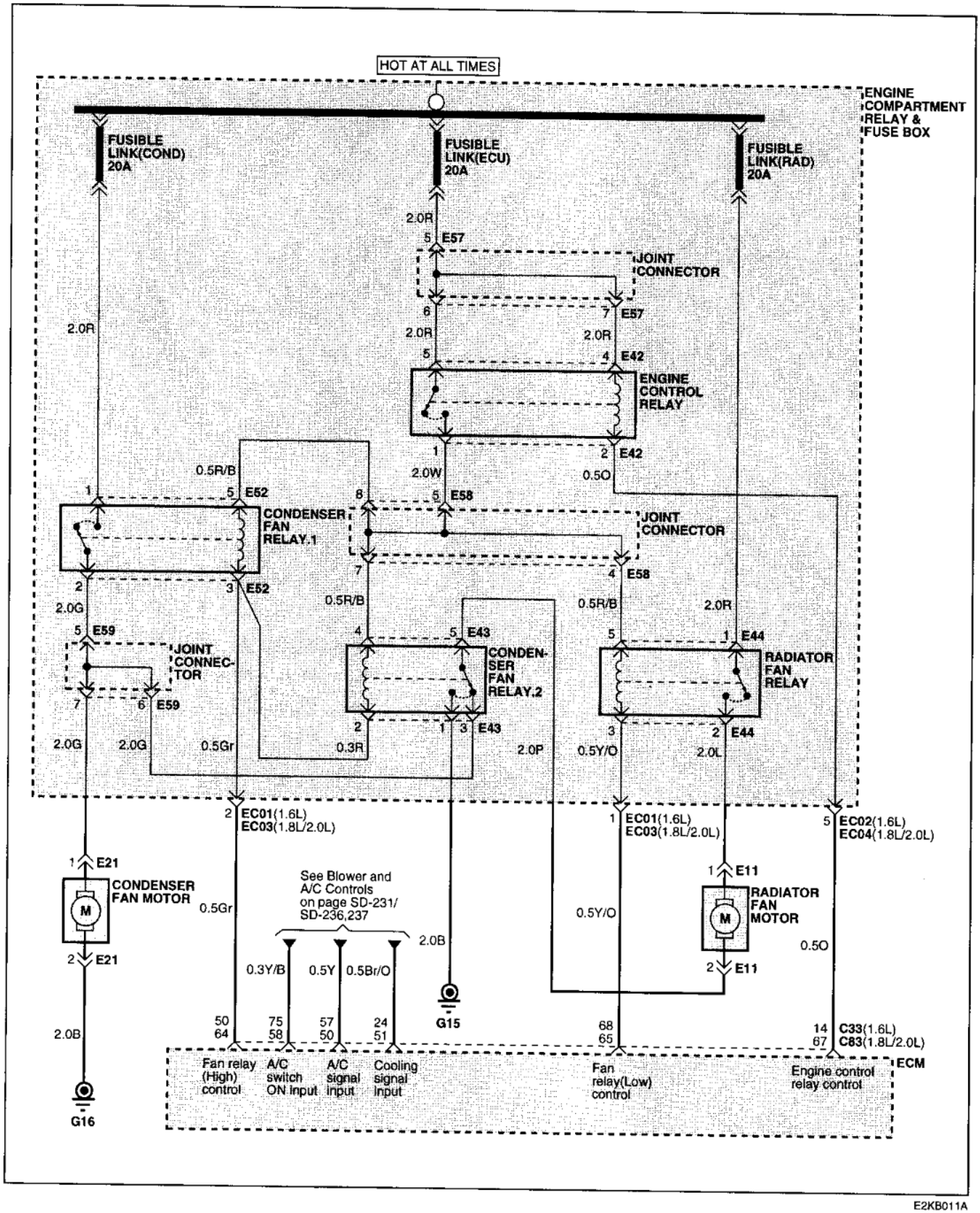
The generator produces AC voltage in its windings as it is belt-driven by the engine. The rectifier converts this AC voltage into DC voltage.
The voltage regulator, a device built-in to the generator frame, controls the generator's output to meet electrical system requirements, and also controls the charge warning lamp.
Fuse 2 supplies battery voltage to the charge warning indicator. With the engine not running and the ignition switch in ON, terminal L of the regulator is grounded internally and the indicator lights up.

A small amount of current provided by both the charge warning lamp and the pre-excitation resistor is used to "excite" the magnetic field windings to start the charging process. With the engine running and the generator charging, terminal L voltage rises and the indicator goes out. If the generator fails to charge, terminal L remains below battery voltage and the indicator remains lit.

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COOLING SYSTEM E2KB0110

COOLING SYSTEM (1)



E2KB011A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C33	ECM (1.6L0	CL-18
C88	ECM (1.8L/2.0L)	CL-21
E11	Radiator fan motor	CL-10
E21	Condenser fan motor	CL-11
E42	Engine control relay	CL-12
E43	Condenser fan relay.2	CL-12
E44	Radiator fan relay	CL-12
E52	Condenser fan relay.1	CL-12
E57	Joint connector	CL-12
E58	Joint connector	CL-12
E59	Joint connector	CL-12
Connectors		
EC01		CL-13
EC02		CL-13
EC03		CL-13
EC04		CL-13
Grounds		
G15		CL-26
G16		CL-26

Circuit Description

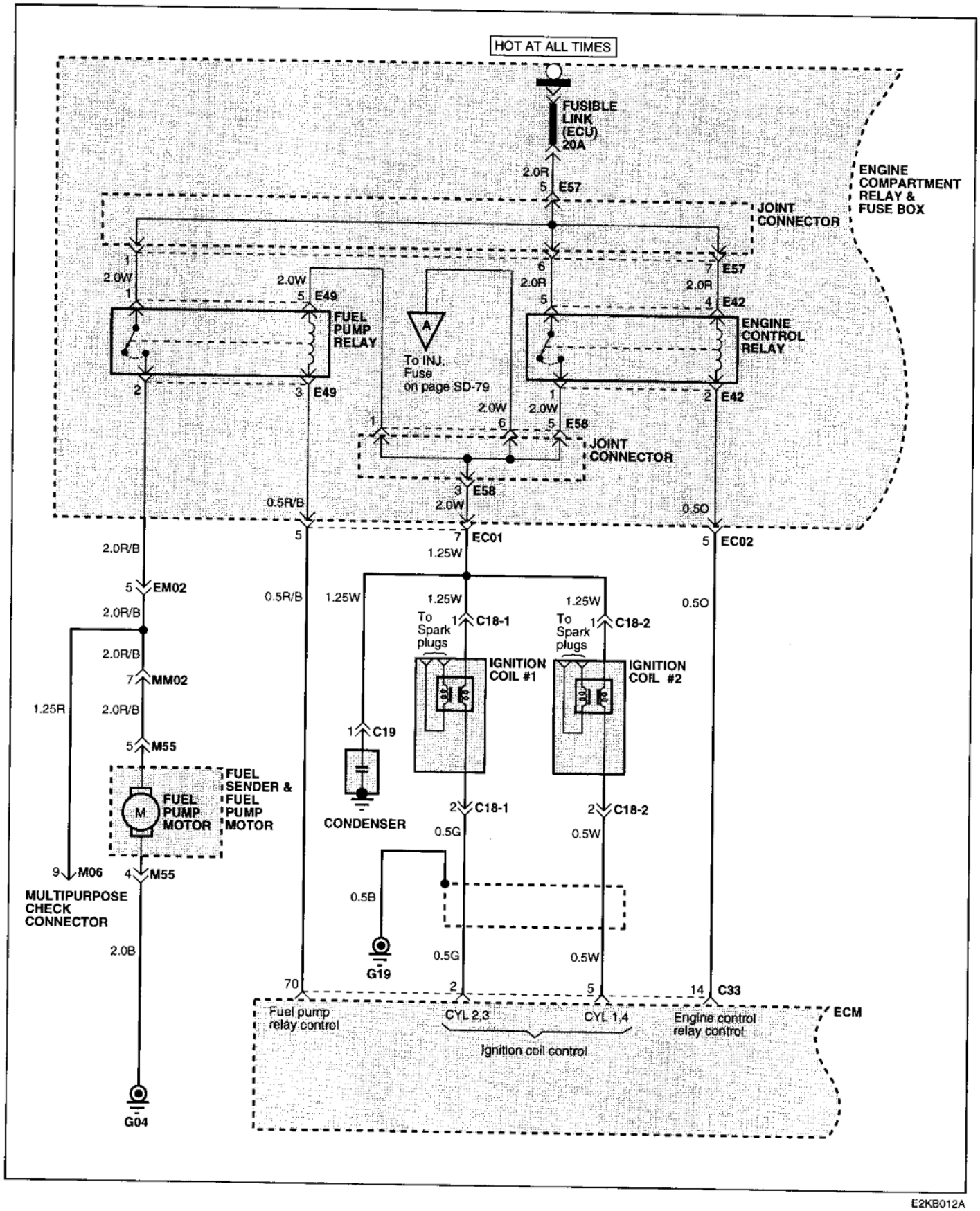
The ECM (Engine Control Module) controls the operation of the radiator fan motor and the condenser fan motor through relay (radiator fan relay and condenser fan relays) control. The ECM monitors coolant temperature through engine coolant temperature sensor.

The module also monitors A/C operation through the A/C switch ON input and the A/C pressure switch input . Using these input signals, the module controls the coil of the appropriate relays (condenser fan relays and radiator fan relay) to provide optimal cooling fan operation.

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MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) E2KB0120

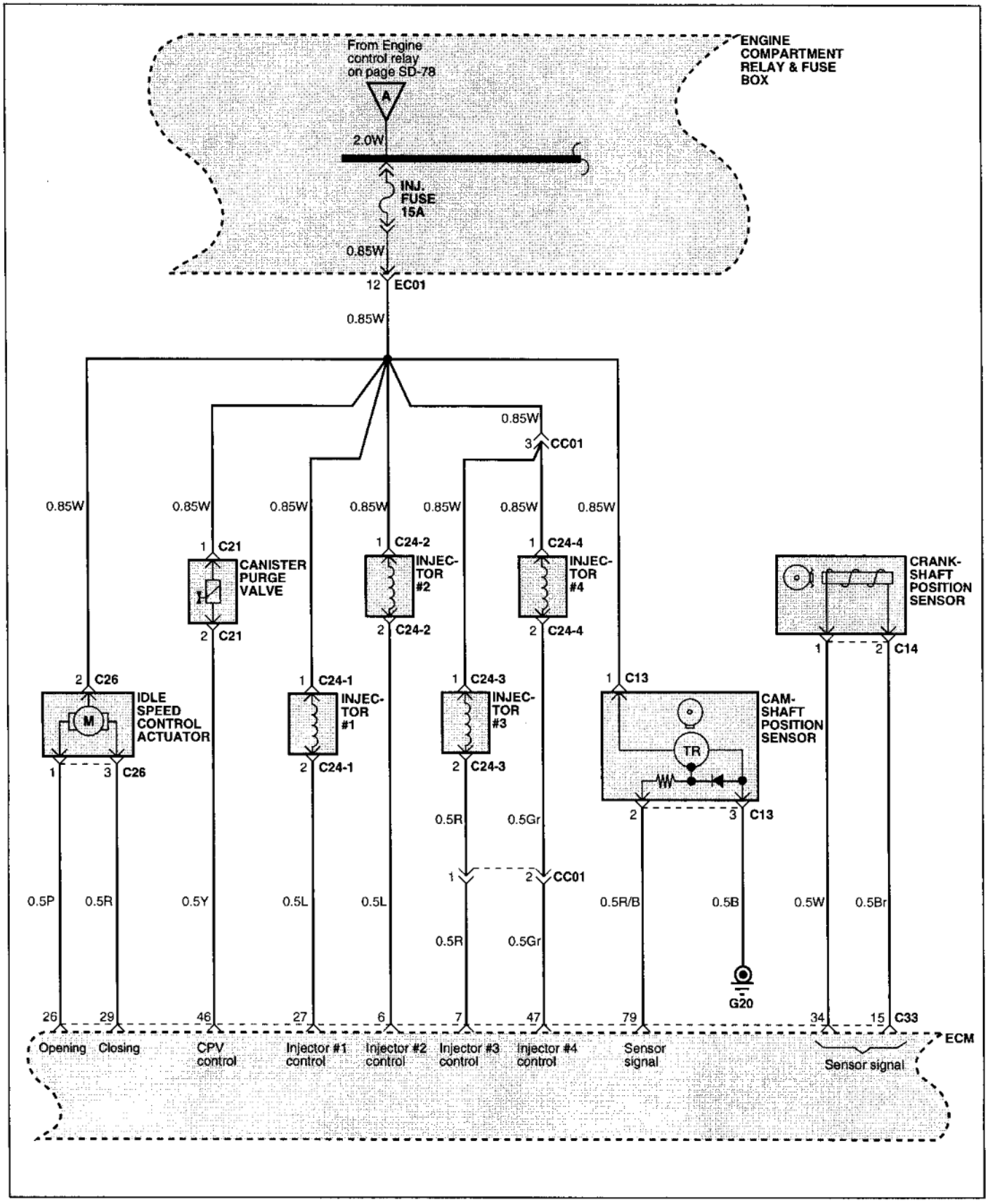
MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (1)



E2KB012A

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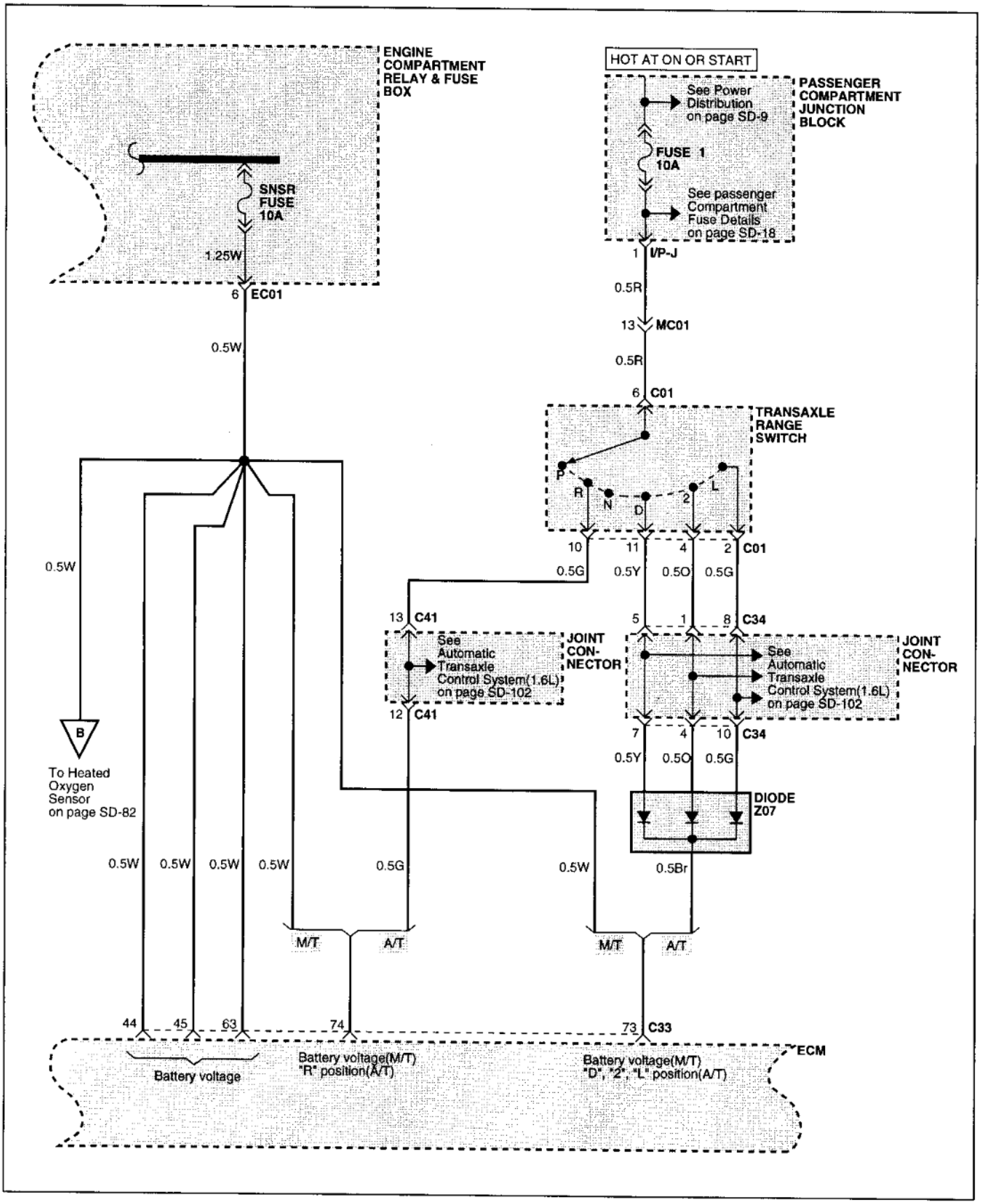
MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (2)



E2KB012B

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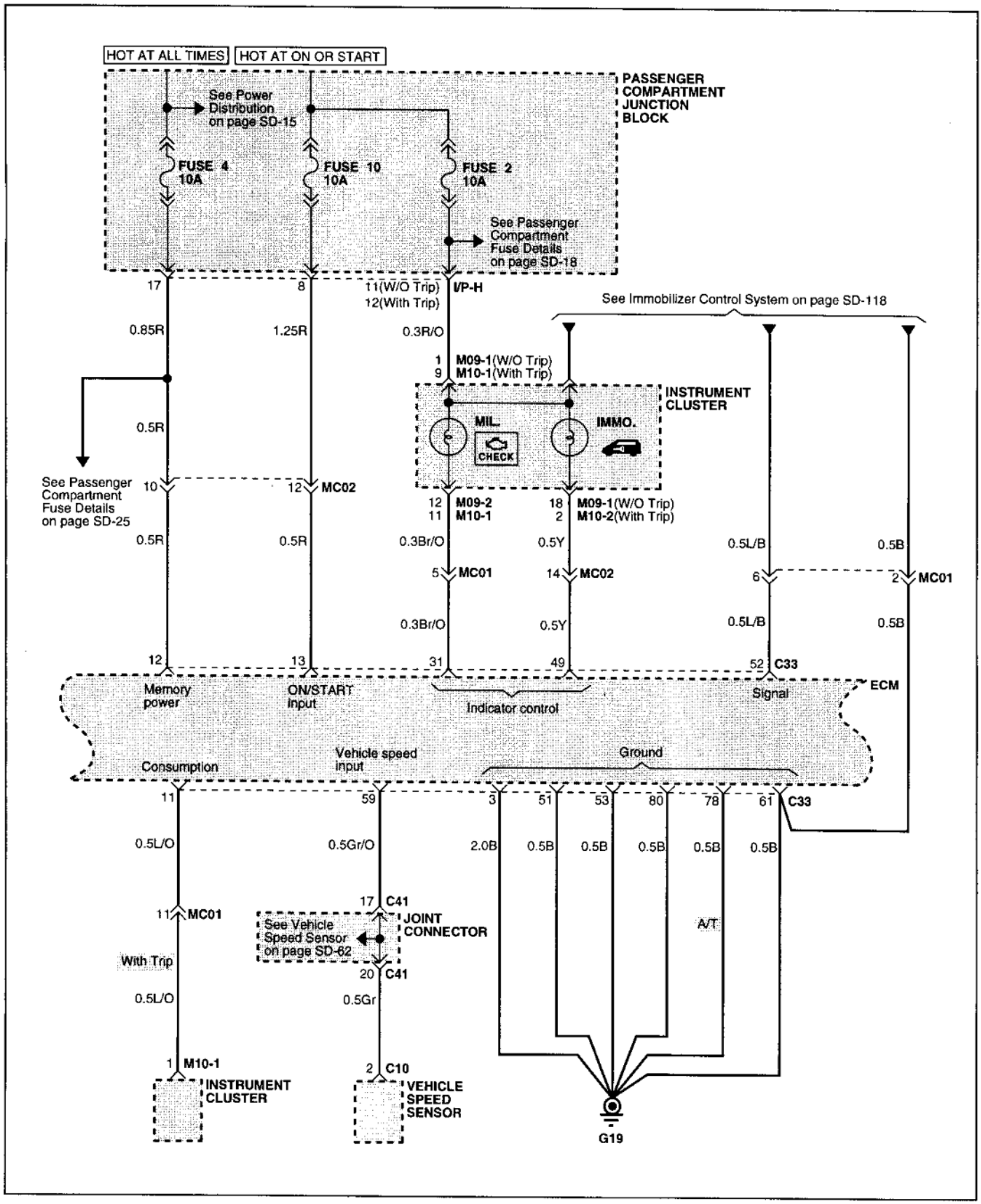
MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (3)



E2KB012C

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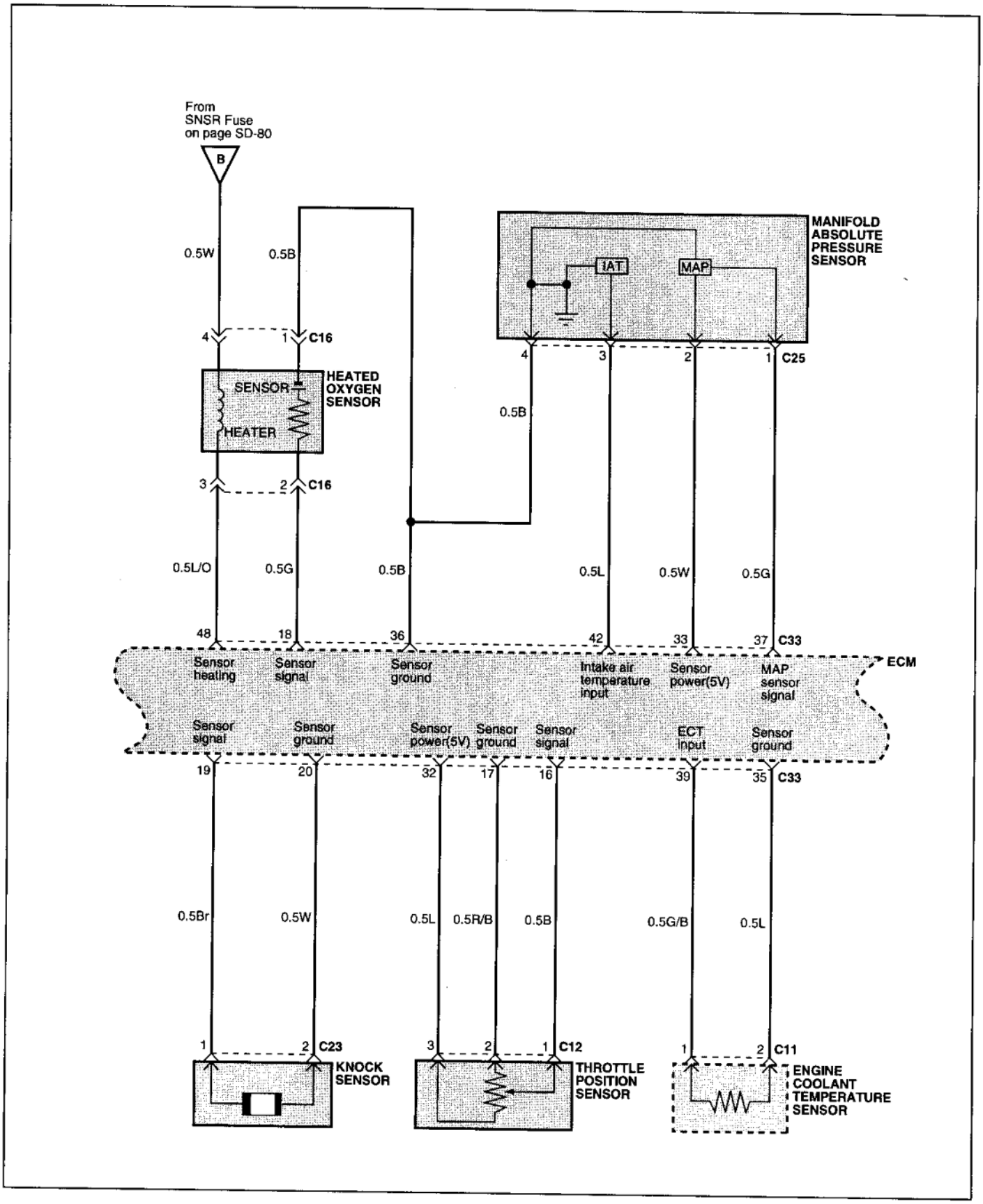
MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (4)



E2KB012D

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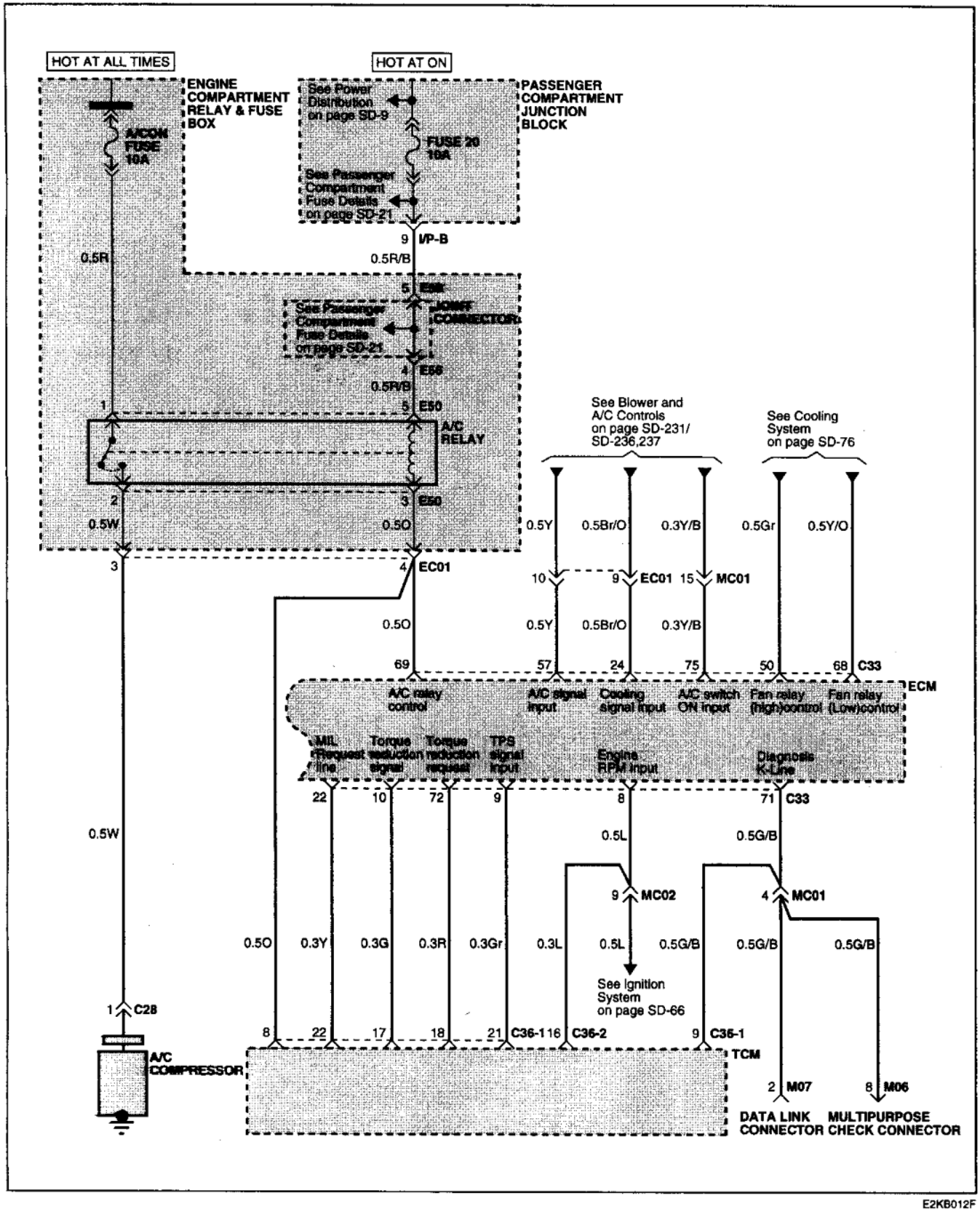
MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (5)



E2KB012E

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MFI CONTROL SYSTEM (1.6L, EXCEPT OBD-II) (6)



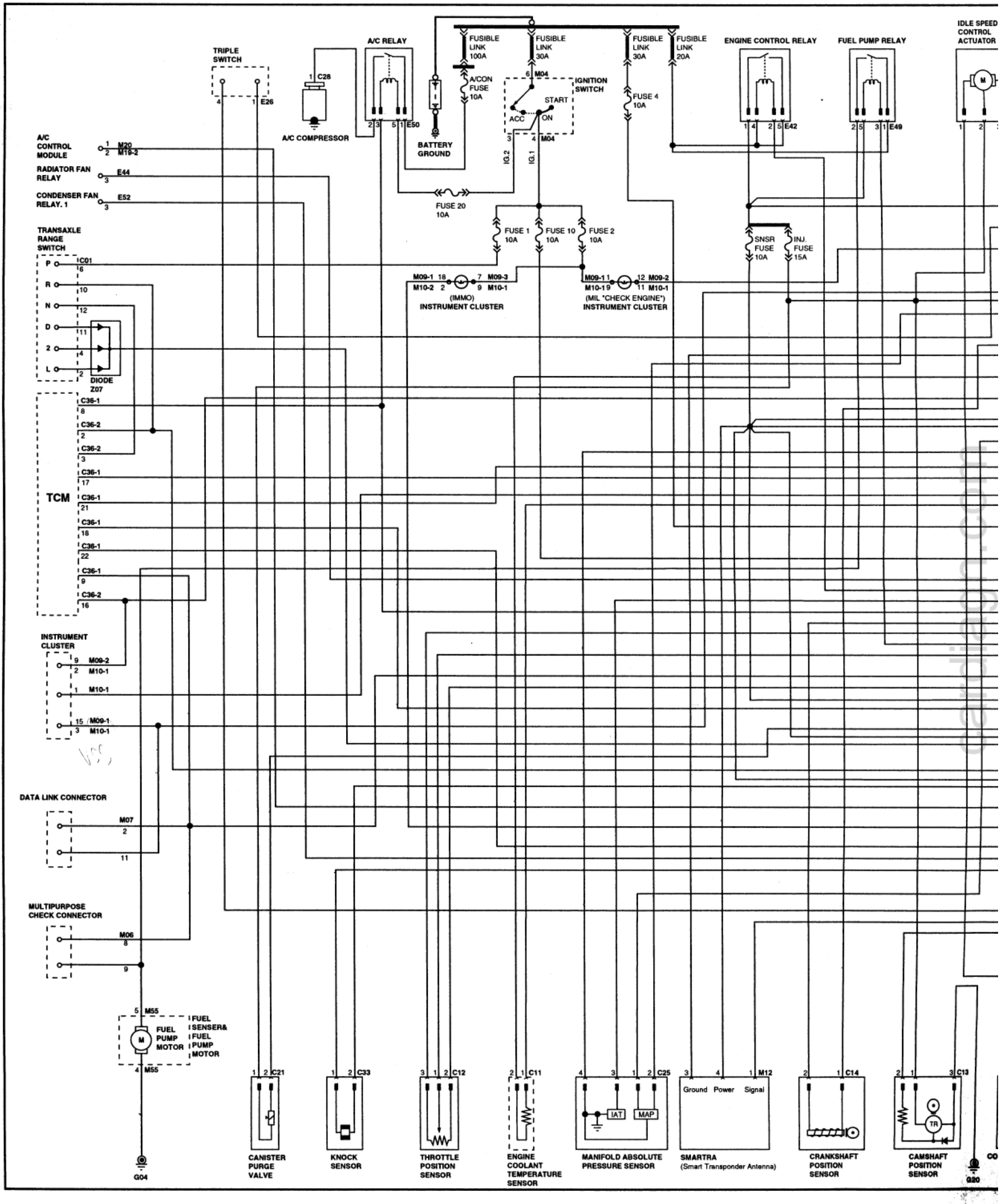
E2KB012F

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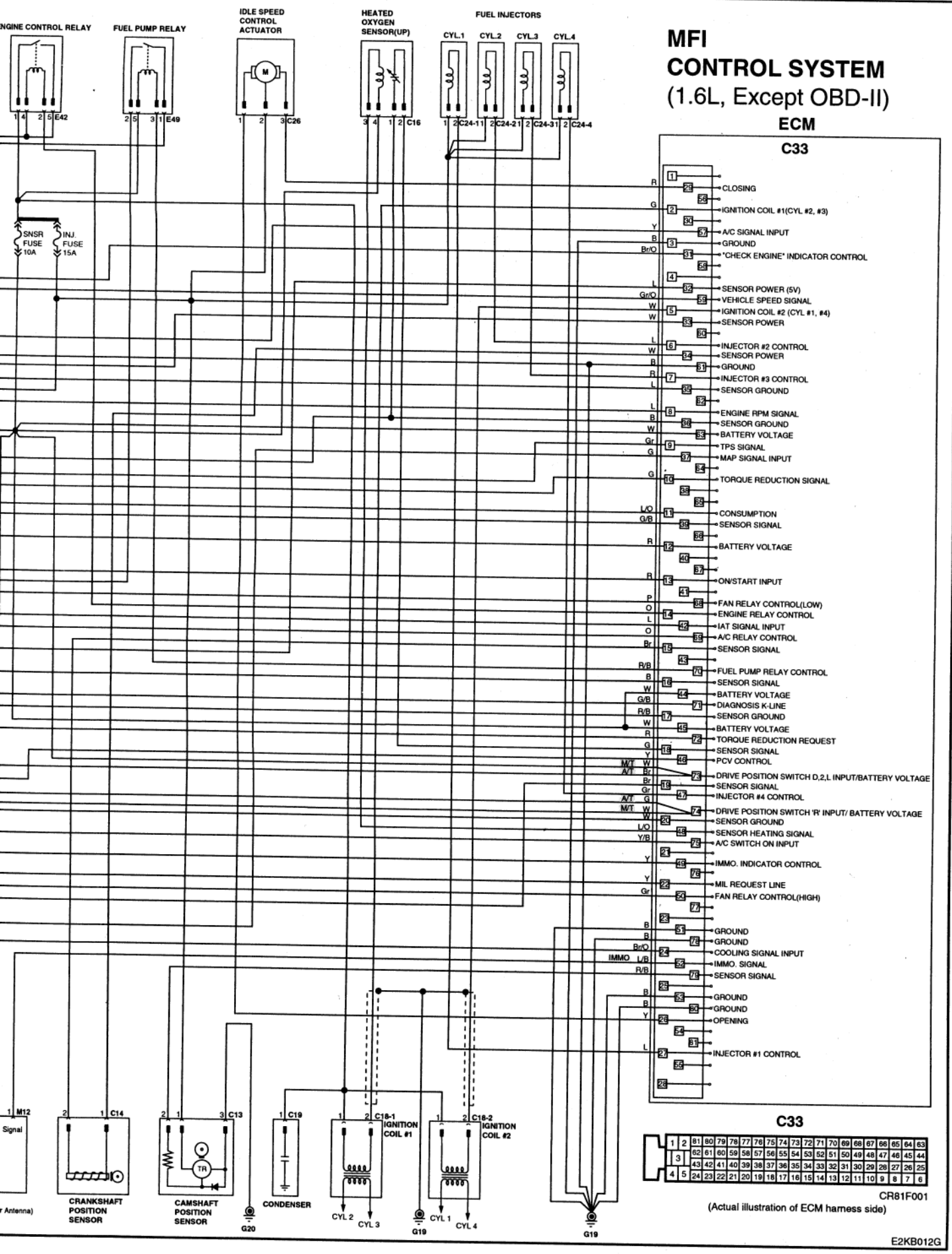
COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch	CL-16
C11	Engine coolant temperature sensor & sender	CL-16
C12	Throttle position sensor	CL-16
C13	Camshaft position sensor	CL-16
C14	Crankshaft position sensor	CL-17
C16	Heated oxygen sensor	CL-17
C18–1	Ignition coil #1	CL-17
C18–2	Ignition coil #2	CL-17
C19	Condenser	CL-17
C21	Canister purge valve	CL-17
C23	Knock sensor	CL-17
C24–1	Injector #1	CL-18
C24–2	Injector #2	CL-18
C24–3	Injector #3	CL-18
C24–4	Injector #4	CL-18
C25	Manifold absolute pressure sensor	CL-18
C26	Idle speed control actuator	CL-18
C28	A/C compressor	CL-18
C33	ECM	CL-18
C34	Joint connector	CL-18
C36–1	TCM	CL-18
C36–2	TCM	CL-18
E41	Joint connector	CL-18
E42	Engine control relay	CL-12
C49	Fuel pump relay	CL-12
E50	A/C relay	CL-12
E56	Joint connector	CL-12
E57	Joint connector	CL-12
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M55	Fuel sender & Fuel pump motor	CL-5

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TRIPLE SWITCH
E26
A/C RELAY
E50
A/C COMPRESSOR
C28
BATTERY GROUND
FUSIBLE LINK 100A
FUSIBLE LINK 30A
FUSIBLE LINK 30A
FUSIBLE LINK 20A
A/CON FUSE 10A
IGNITION SWITCH
M04
ACC
START
ON
IG.2
IG.1
FUSE 4 10A
ENGINE CONTROL RELAY
E42
FUEL PUMP RELAY
E49
IDLE SPEED CONTROL ACTUATOR
A/C CONTROL MODULE
M20
M18-2
RADIATOR FAN RELAY
E44
CONDENSER FAN RELAY. 1
E52
FUSE 20 10A
FUSE 1 10A
FUSE 10 10A
FUSE 2 10A
SNSR FUSE 10A
INJ. FUSE 15A
TRANSAXLE RANGE SWITCH
P
R
N
D
2
L
C01
DIODE
Z07
M09-1
M10-2
M09-3
M10-1
(IMMO)
INSTRUMENT CLUSTER
M09-1
M10-1
M09-2
M10-1
(MIL "CHECK ENGINE")
INSTRUMENT CLUSTER
TCM
C36-1
C36-2
C36-2
C36-1
C36-1
C36-1
C36-1
C36-1
C36-2
INSTRUMENT CLUSTER
M09-2
M10-1
M10-1
M09-1
M10-1
DATA LINK CONNECTOR
M07
MULTIPURPOSE CHECK CONNECTOR
M06
M55
FUEL PUMP MOTOR
FUEL SENSER& FUEL PUMP MOTOR
M55
G04
C21
CANISTER PURGE VALVE
C33
KNOCK SENSOR
C12
THROTTLE POSITION SENSOR
C11
ENGINE COOLANT TEMPERATURE SENSOR
C25
IAT
MAP
MANIFOLD ABSOLUTE PRESSURE SENSOR
M12
Ground
Power
Signal
SMARTRA
(Smart Transponder Antenna)
C14
CRANKSHAFT POSITION SENSOR
C13
TR
CAMSHAFT POSITION SENSOR
G20

MFI CONTROL SYSTEM
(1.6L, Except OBD-II)



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COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
CC01	CL-22
EC01	CL-13
EC02	CL-13
EM02	CL-13
I/P-B	CL-9
I/P-F	CL-9
I/P-G	CL-9
I/P-H	CL-9
MC01	CL-8
MC02	CL-8
MM01	CL-9
MM02	CL-9
MM03	CL-9
Grounds	
G04	CL-25
G19	CL-26
G20	CL-26

Circuit Description

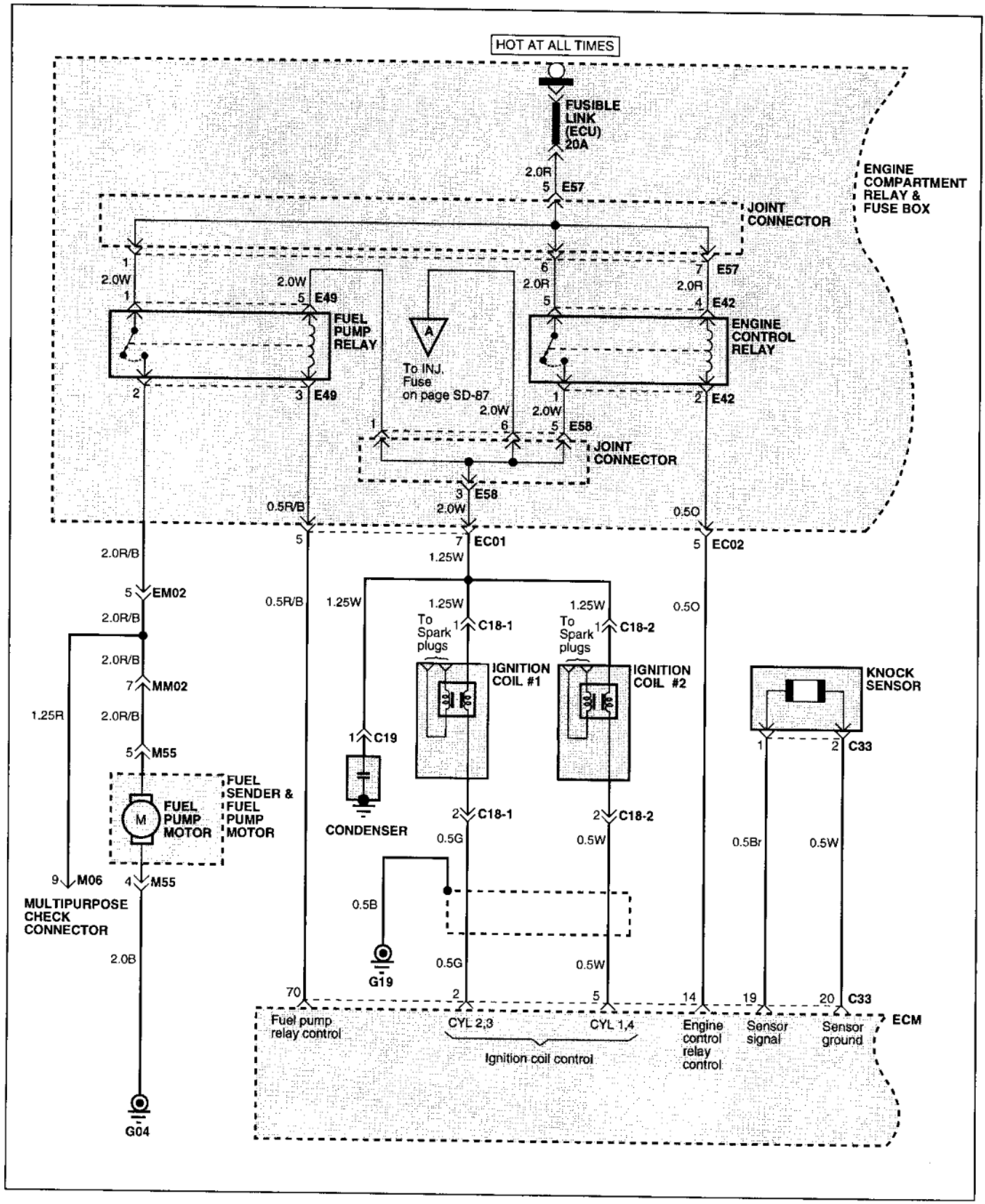
The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near inlet ports of each cylinder. The amount of fuel injection is determined by the ECM according to engine speed and intake air-flow quantity measured by sensors.

The emission control system includes oxygen sensor and catalytic converters. The MFI's three major functions are air-fuel mixture, idle speed and ignition timing control.

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MFI CONTROL SYSTEM (1.6L, OBD-II) E2KB0130

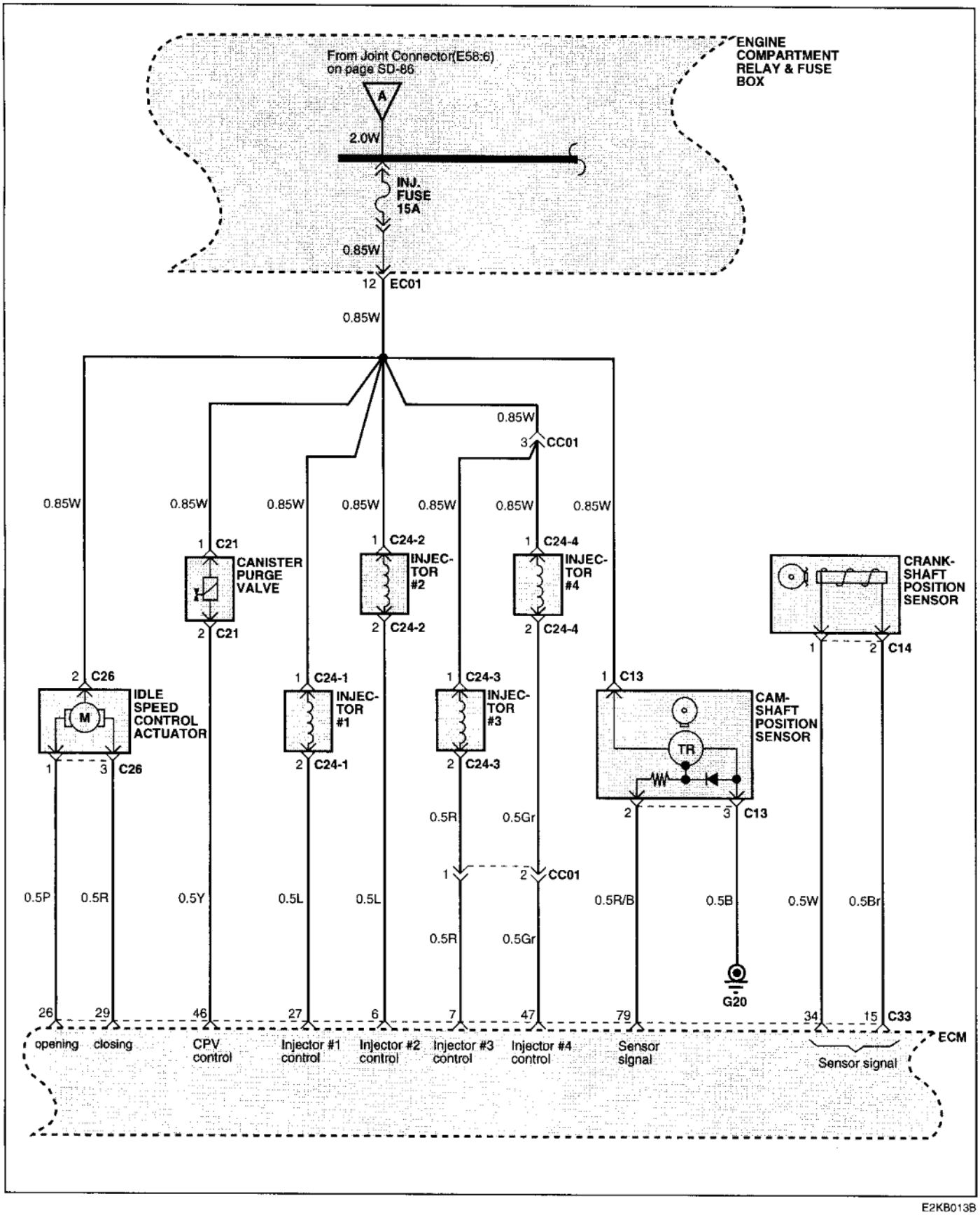
MFI CONTROL SYSTEM (1.6L, OBD-II) (1)



E2KB013A

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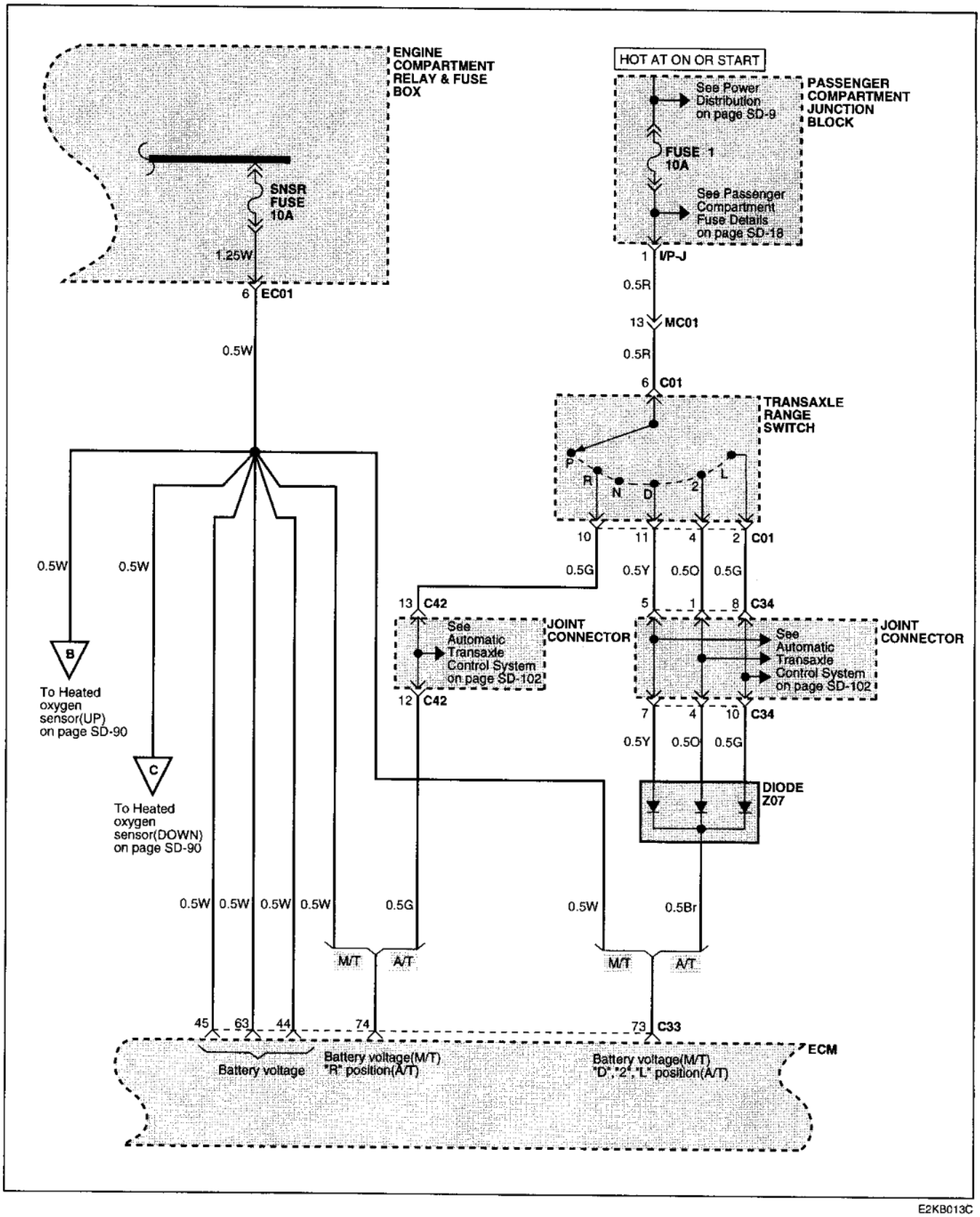
MFI CONTROL SYSTEM (1.6L, OBD-II) (2)



E2KB013B

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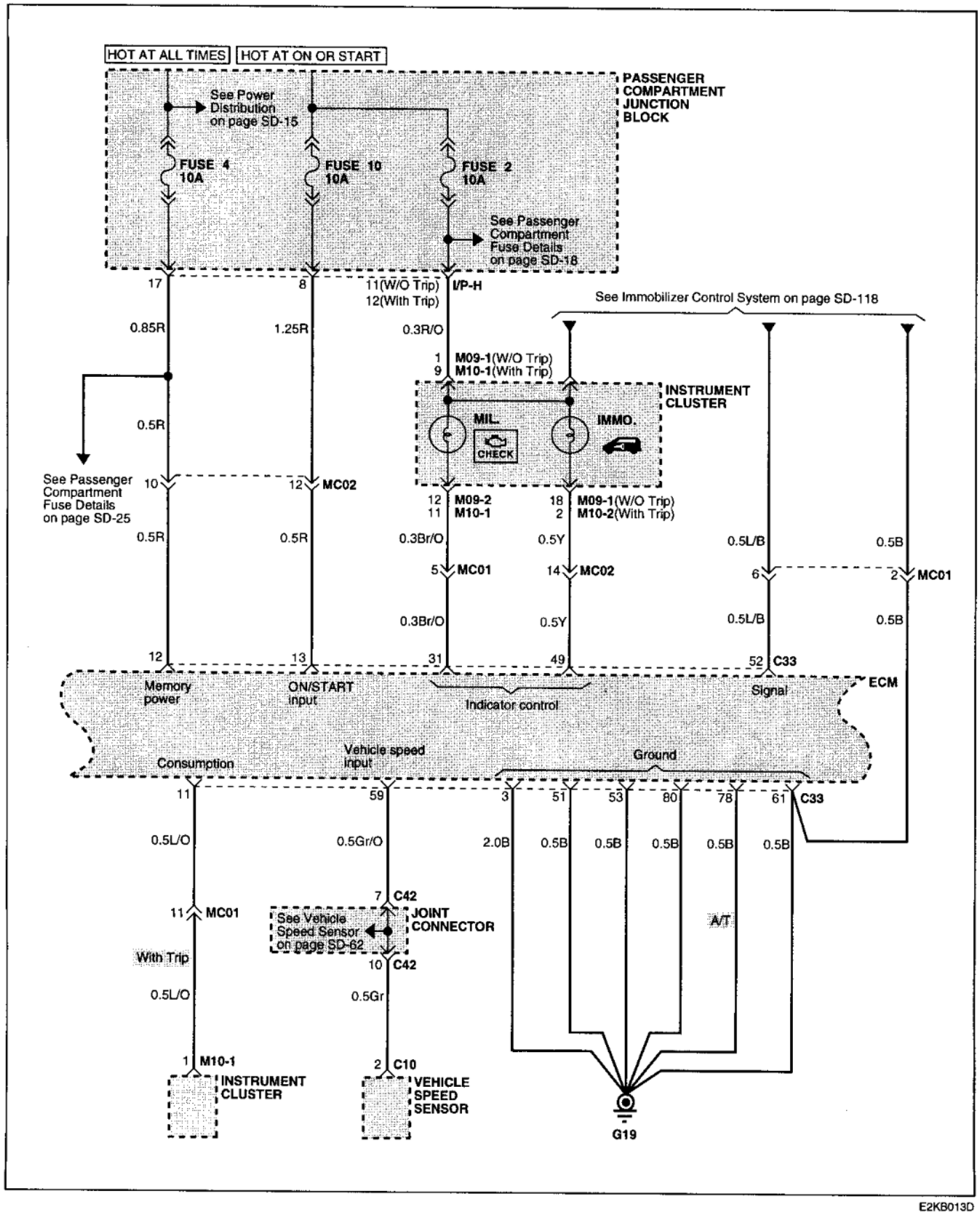
MFI CONTROL SYSTEM (1.6L, OBD-II) (3)



E2KB013C

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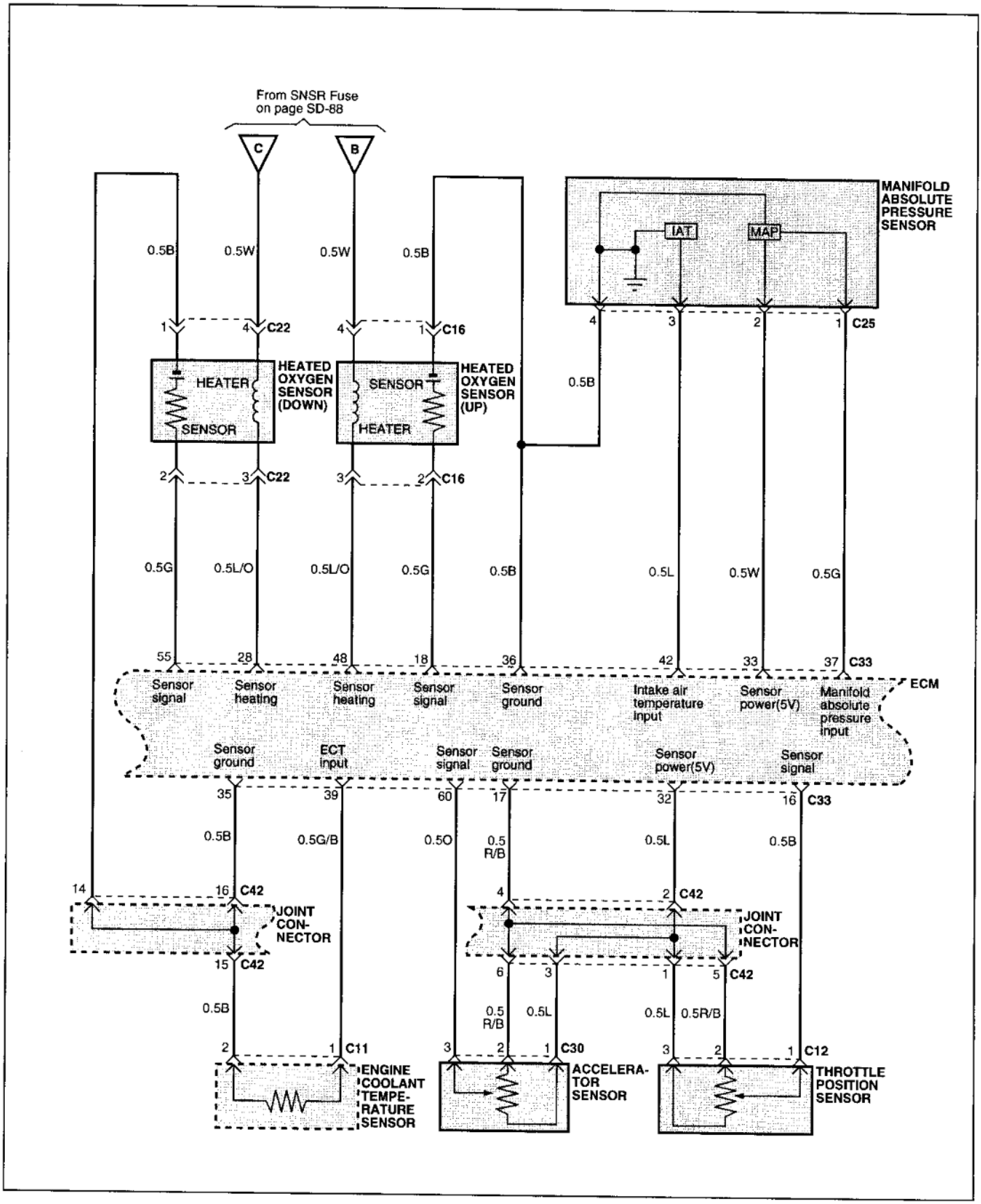
MFI CONTROL SYSTEM (1.6L, OBD-II) (4)



E2KB013D

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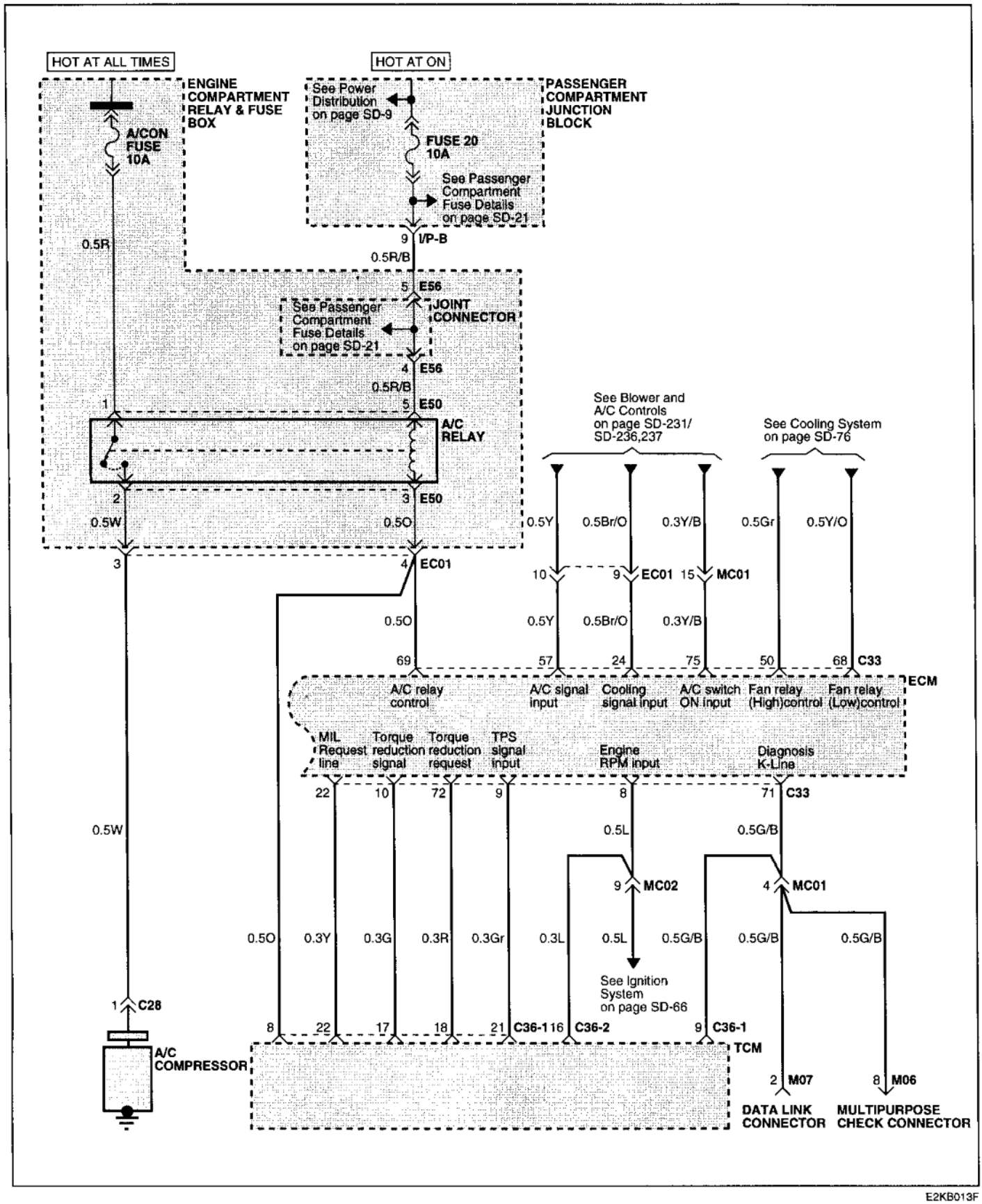
MFI CONTROL SYSTEM (1.6L, OBD-II) (5)



E2KB013E

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MFI CONTROL SYSTEM (1.6L, OBD-II) (6)



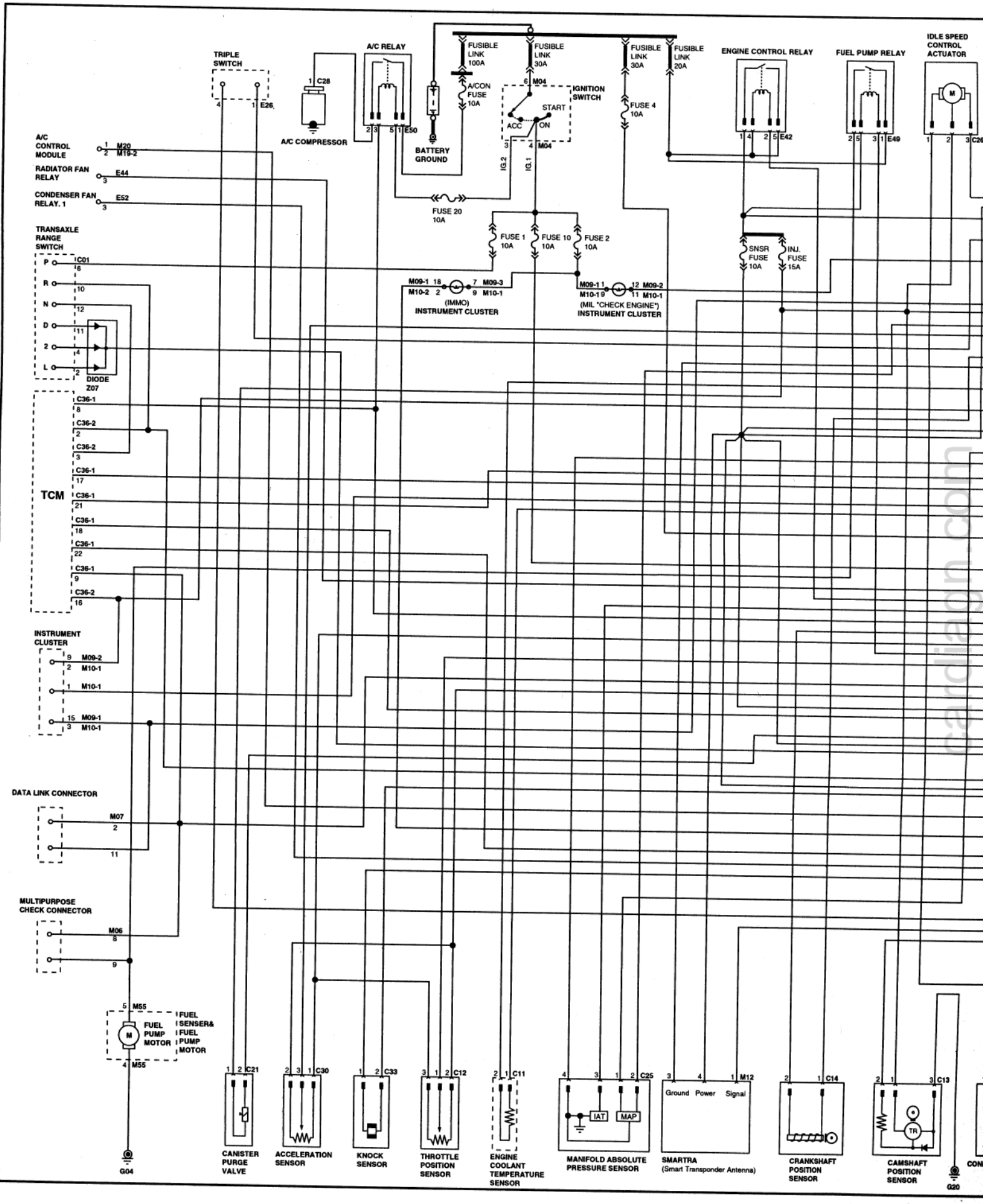
E2KB013F

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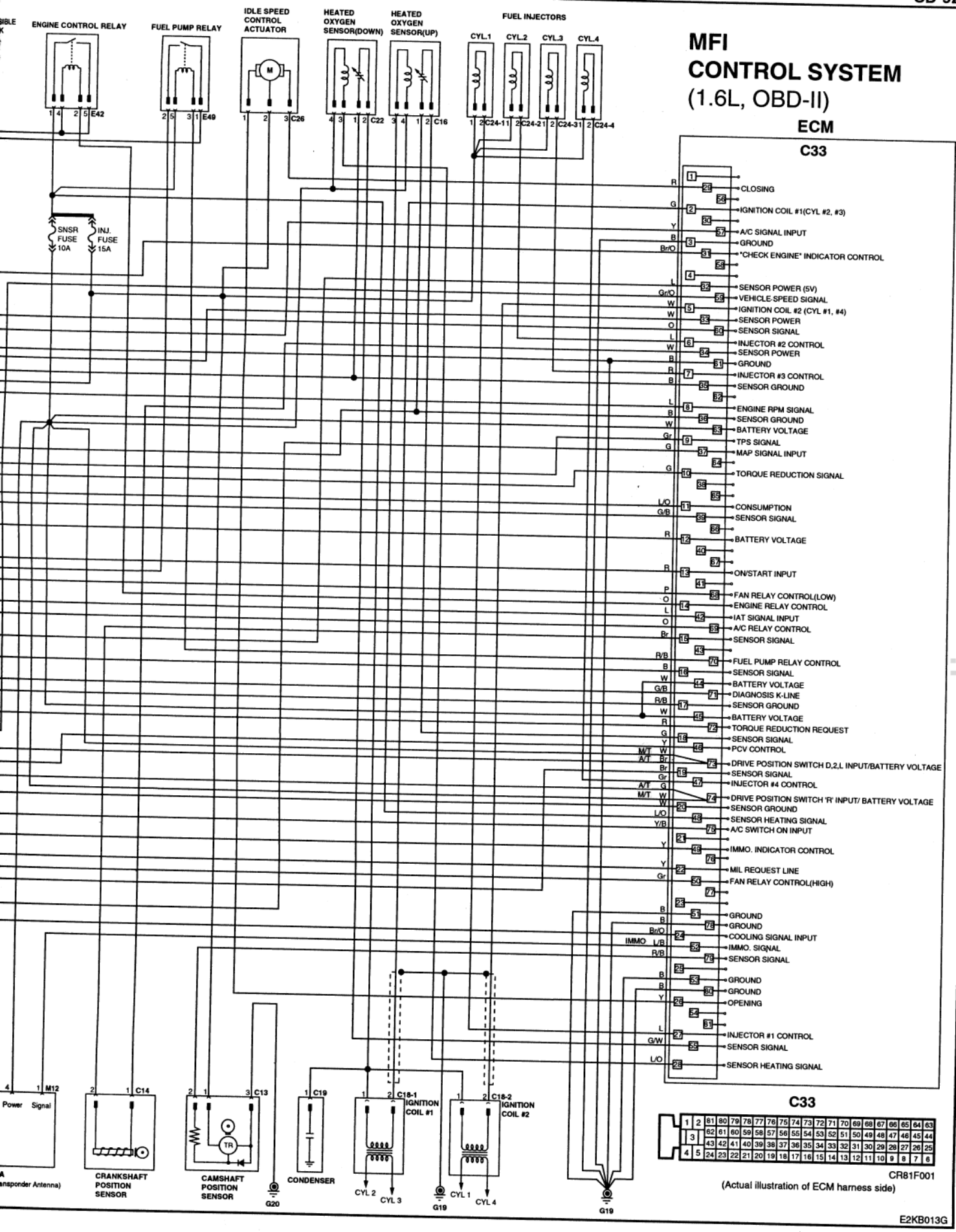
COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch	CL-16
C11	Engine coolant temperature sensor & sender	CL-16
C12	Throttle position sensor	CL-16
C13	Camshaft position sensor	CL-16
C14	Crankshaft position sensor	CL-17
C16	Heated oxygen sensor (UP)	CL-17
C18–1	Ignition coil #1	CL-17
C18–2	Ignition coil #2	CL-17
C19	Condenser	CL-17
C21	Canister purge valve	CL-17
C22	Heated oxygen sensor (DOWN)	CL-17
C23	Knock sensor	CL-18
C24–1	Injector #1	CL-18
C24–2	Injector #2	CL-18
C24–3	Injector #3	CL-18
C24–4	Injector #4	CL-18
C25	Manifold absolute pressure sensor	CL-18
C26	Idle speed control actuator	CL-18
C28	A/C compressor	CL-18
C33	ECM	CL-18
C34	Joint connector	CL-18
C36–1	TCM	CL-18
C36–2	TCM	CL-18
C41	Joint connector	CL-18
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E49	Fuel pump relay	CL-12
E50	A/C relay	CL-12
E56	Joint connector	CL-12
E57	Joint connector	CL-12
M06	Multipurpose check connector	CL-2
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M09–1	Instrument cluster (W/O Trip)	CL-2
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M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M55	Fuel sender & Fuel pump motor	CL-5

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TRIPLE SWITCH
A/C RELAY
FUSIBLE LINK 100A
FUSIBLE LINK 30A
FUSIBLE LINK 30A
FUSIBLE LINK 20A
ENGINE CONTROL RELAY
FUEL PUMP RELAY
IDLE SPEED CONTROL ACTUATOR
A/C COMPRESSOR
A/CON FUSE 10A
IGNITION SWITCH
START
ACC
ON
FUSE 4 10A
BATTERY GROUND
IG.2
IG.1
FUSE 20 10A
FUSE 1 10A
FUSE 10 10A
FUSE 2 10A
SNSR FUSE 10A
INJ. FUSE 15A
A/C CONTROL MODULE
RADIATOR FAN RELAY
CONDENSER FAN RELAY. 1
TRANSAXLE RANGE SWITCH
P
R
N
D
2
L
DIODE
Z07
(IMMO) INSTRUMENT CLUSTER
(MIL "CHECK ENGINE") INSTRUMENT CLUSTER
TCM
INSTRUMENT CLUSTER
DATA LINK CONNECTOR
MULTIPURPOSE CHECK CONNECTOR
FUEL PUMP MOTOR
FUEL SENSER& FUEL PUMP MOTOR
CANISTER PURGE VALVE
ACCELERATION SENSOR
KNOCK SENSOR
THROTTLE POSITION SENSOR
ENGINE COOLANT TEMPERATURE SENSOR
MANIFOLD ABSOLUTE PRESSURE SENSOR
IAT
MAP
SMARTRA (Smart Transponder Antenna)
Ground
Power
Signal
CRANKSHAFT POSITION SENSOR
CAMSHAFT POSITION SENSOR
TR
G04
G20

MFI CONTROL SYSTEM (1.6L, OBD-II)



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COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
CC01	CL-22
EC01	CL-13
EC02	CL-13
EM02	CL-13
I/P-B	CL-9
I/P-F	CL-9
I/P-G	CL-9
I/P-H	CL-9
MC01	CL-8
MC02	CL-8
MM01	CL-9
MM02	CL-9
MM03	CL-9
Grounds	
G04	CL-25
G19	CL-26
G20	CL-26

Circuit Description

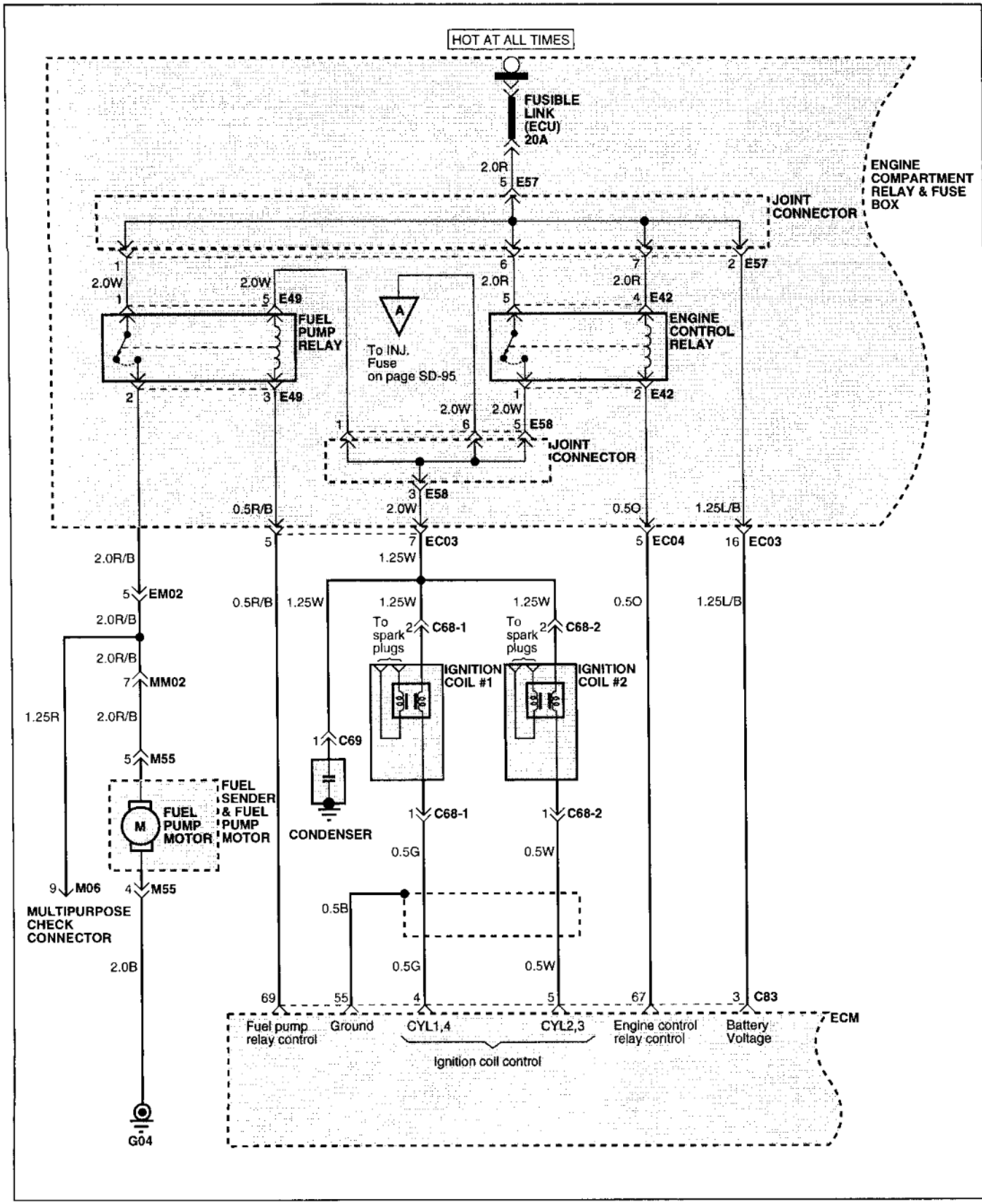
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The emission control system includes oxygen sensors and catalytic converters. The MFI's three major functions are air-fuel mixture, idle speed and ignition timing control.

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MFI CONTROL SYSTEM (1.8L/2.0L) E2KB0140

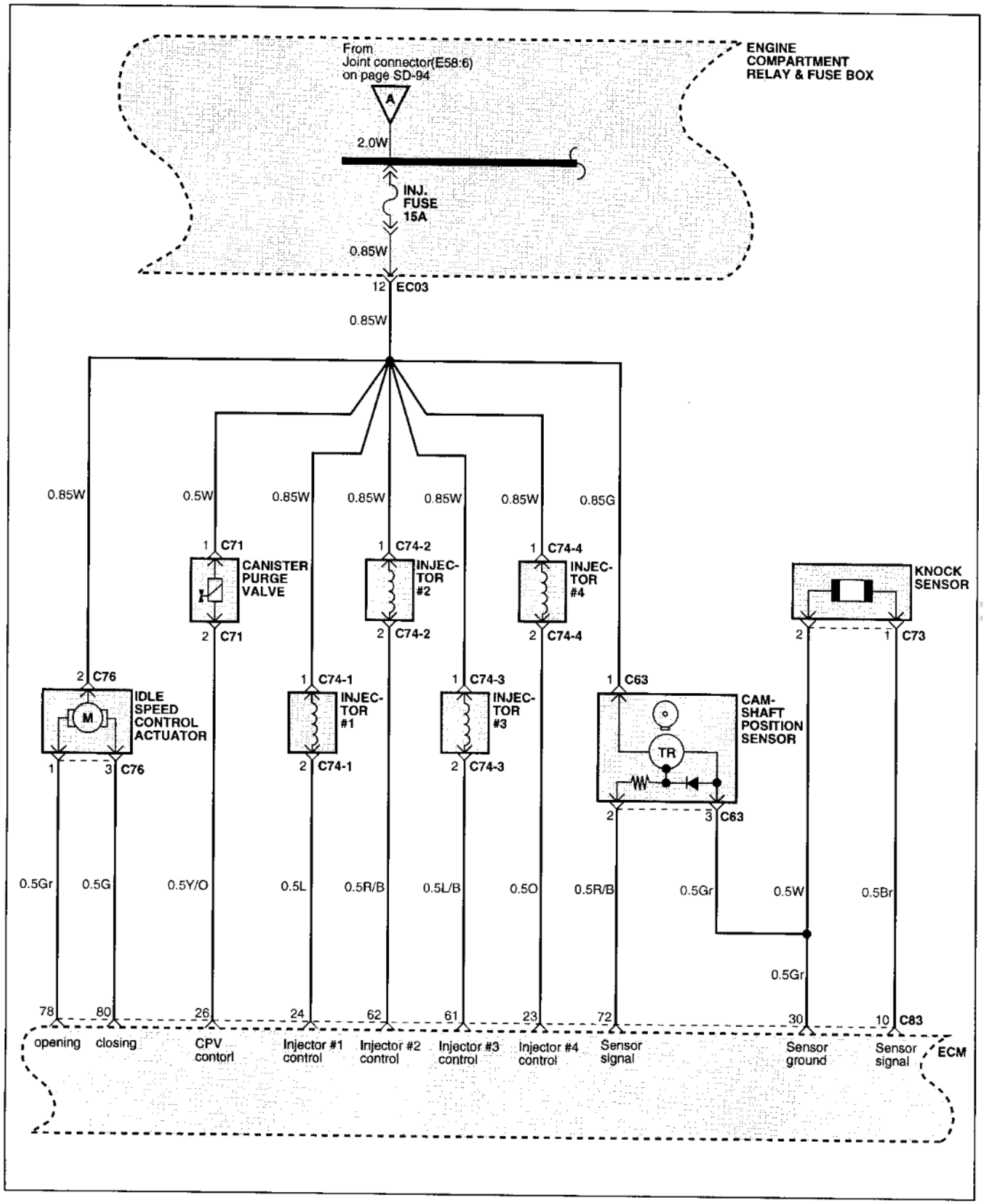
MFI CONTROL SYSTEM (1.8L/2.0L) (1)



E2KB014A

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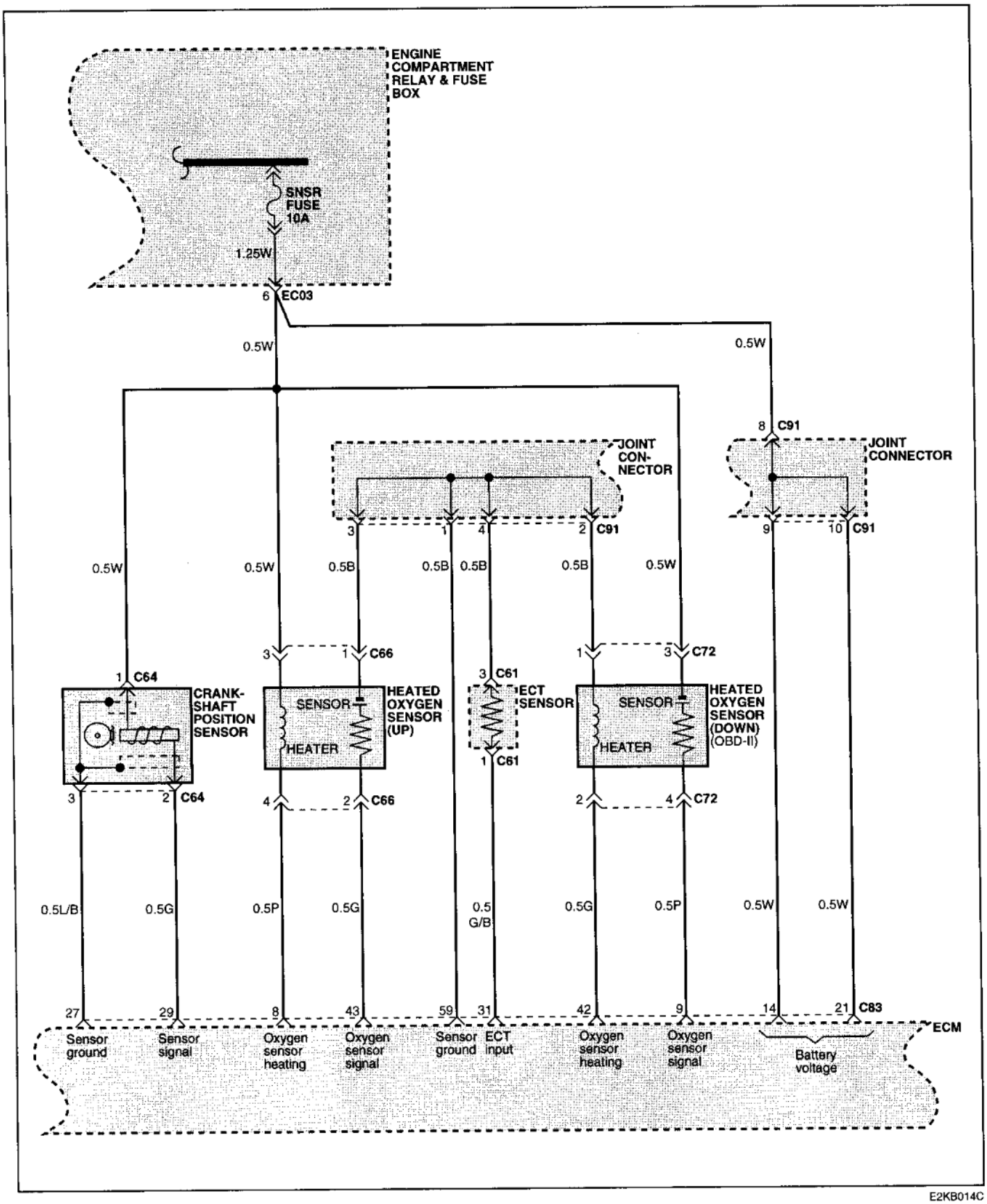
MFI CONTROL SYSTEM (1.8L/2.0L) (2)



E2KB014B

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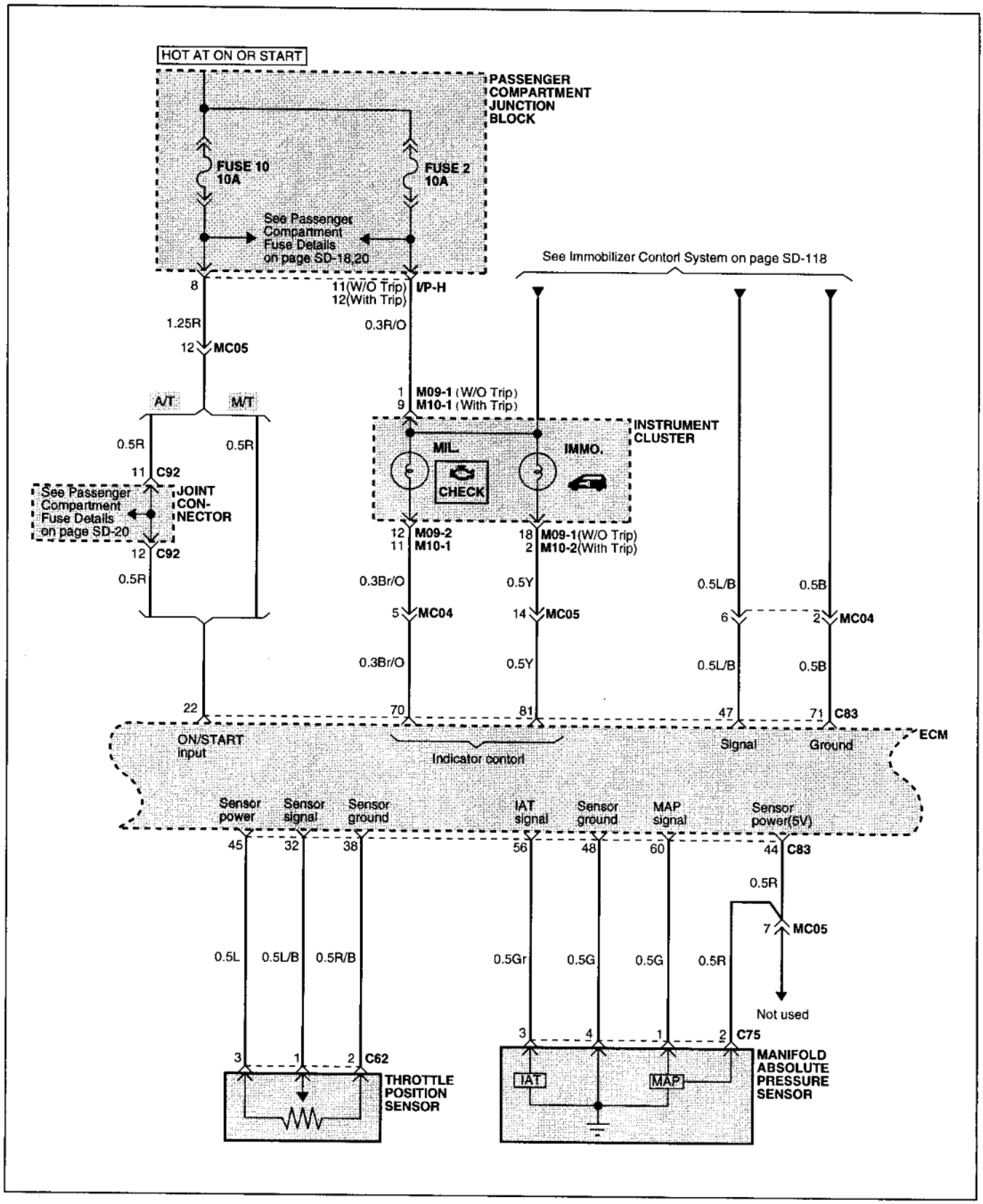
MFI CONTROL SYSTEM (1.8L/2.0L) (3)



E2KB014C

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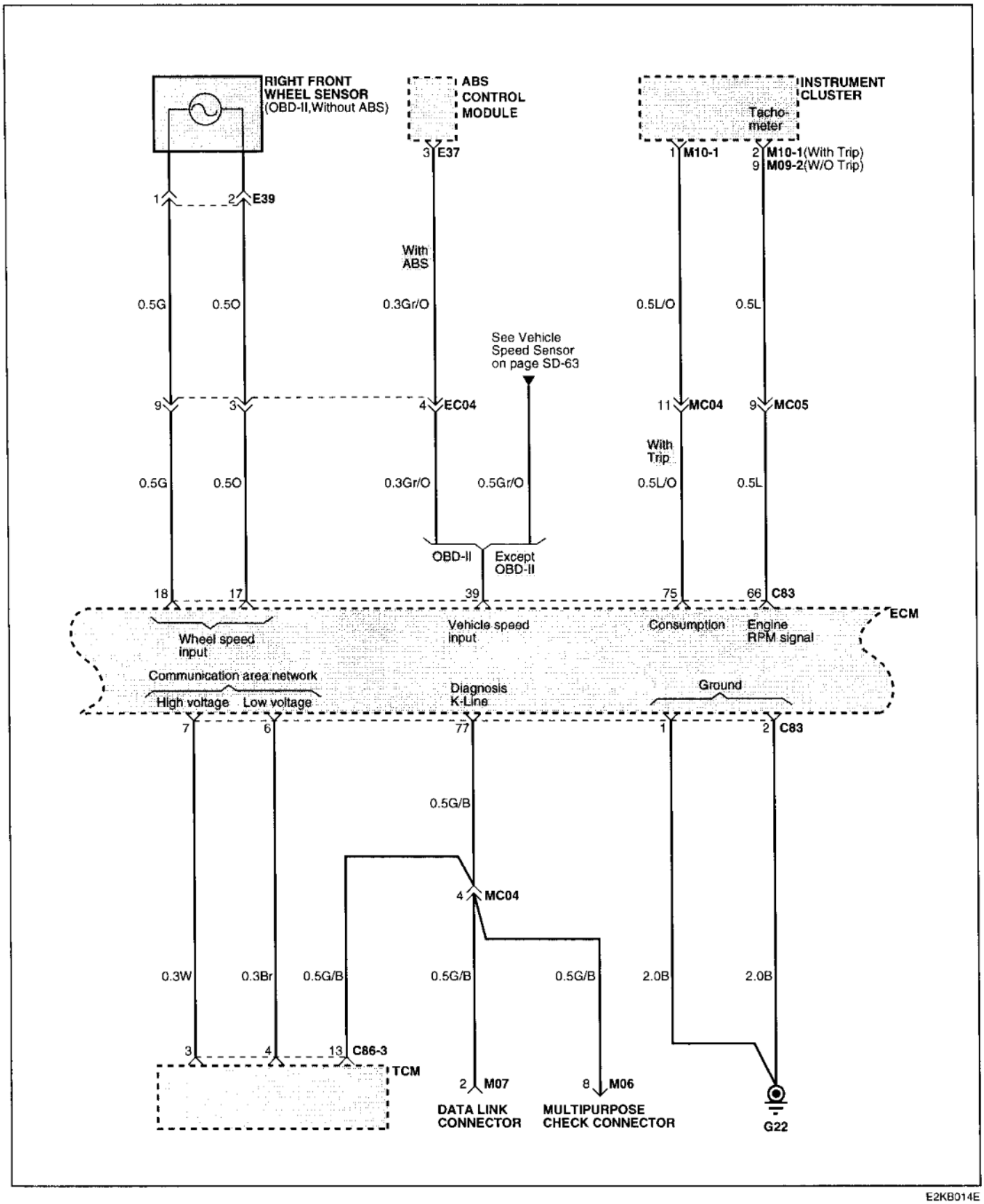
MFI CONTROL SYSTEM (1.8L/2.0L) (4)



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E2KB014D

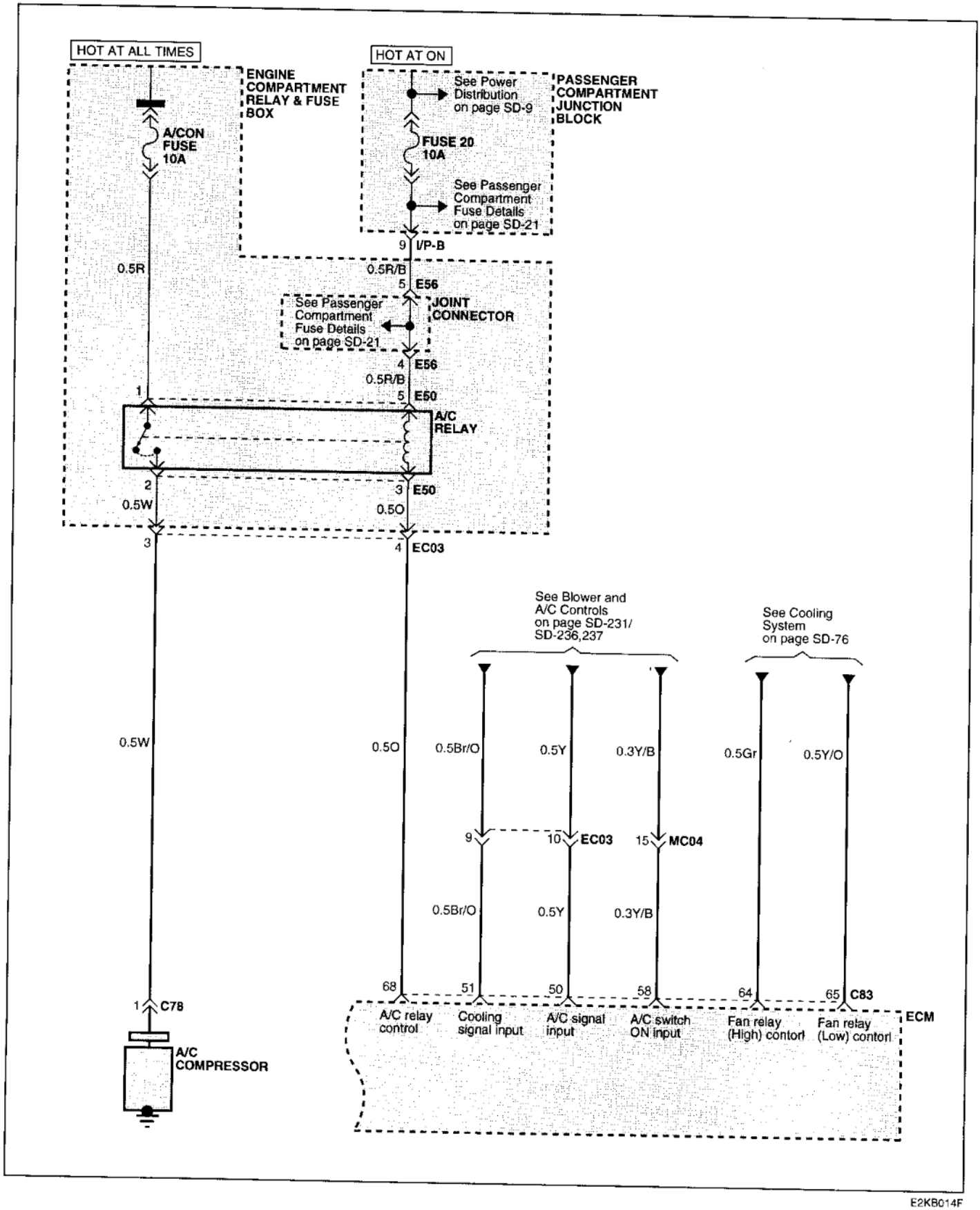
MFI CONTROL SYSTEM (1.8L/2.0L) (5)



E2KB014E

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MFI CONTROL SYSTEM (1.8L/2.0L) (6)



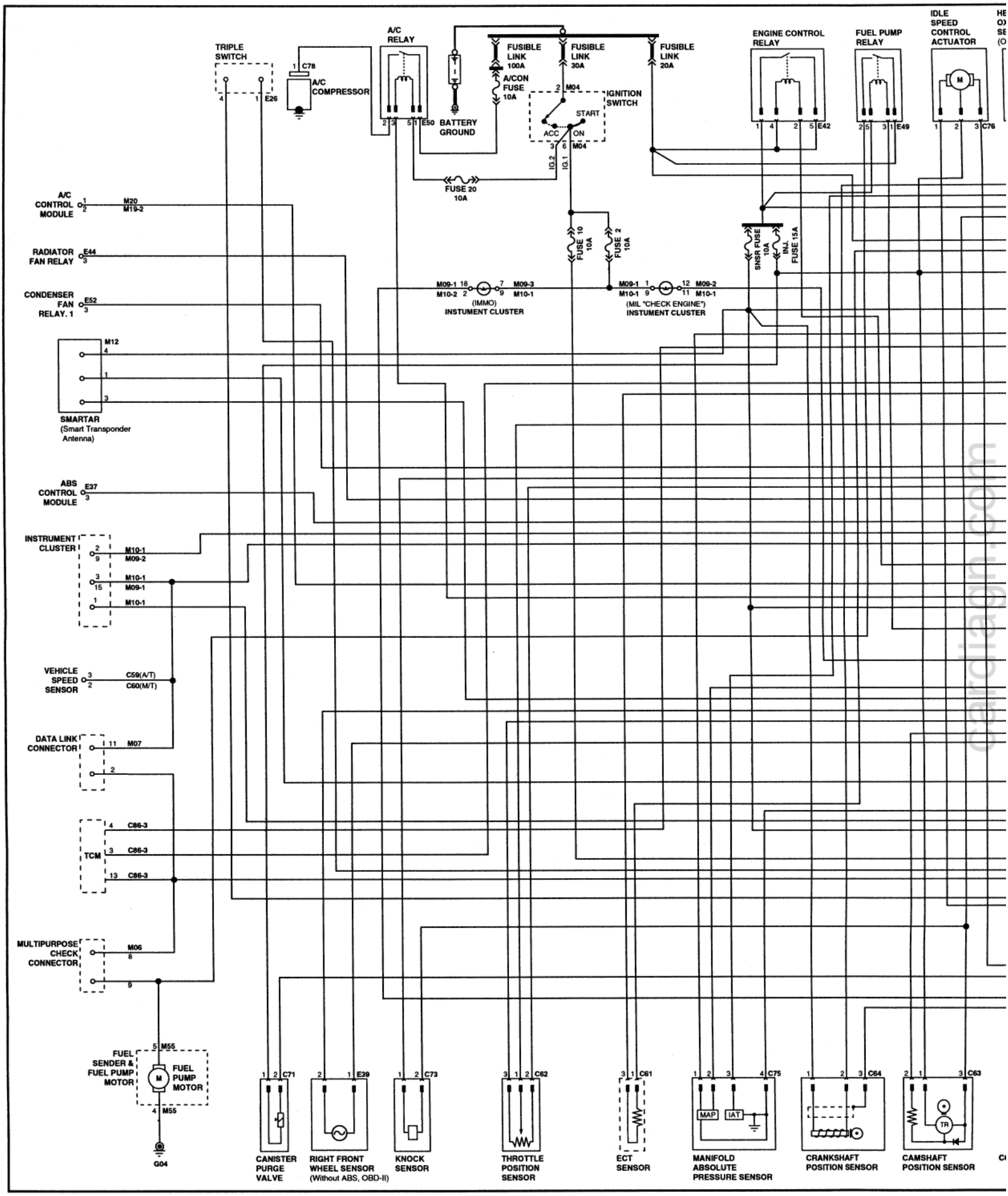
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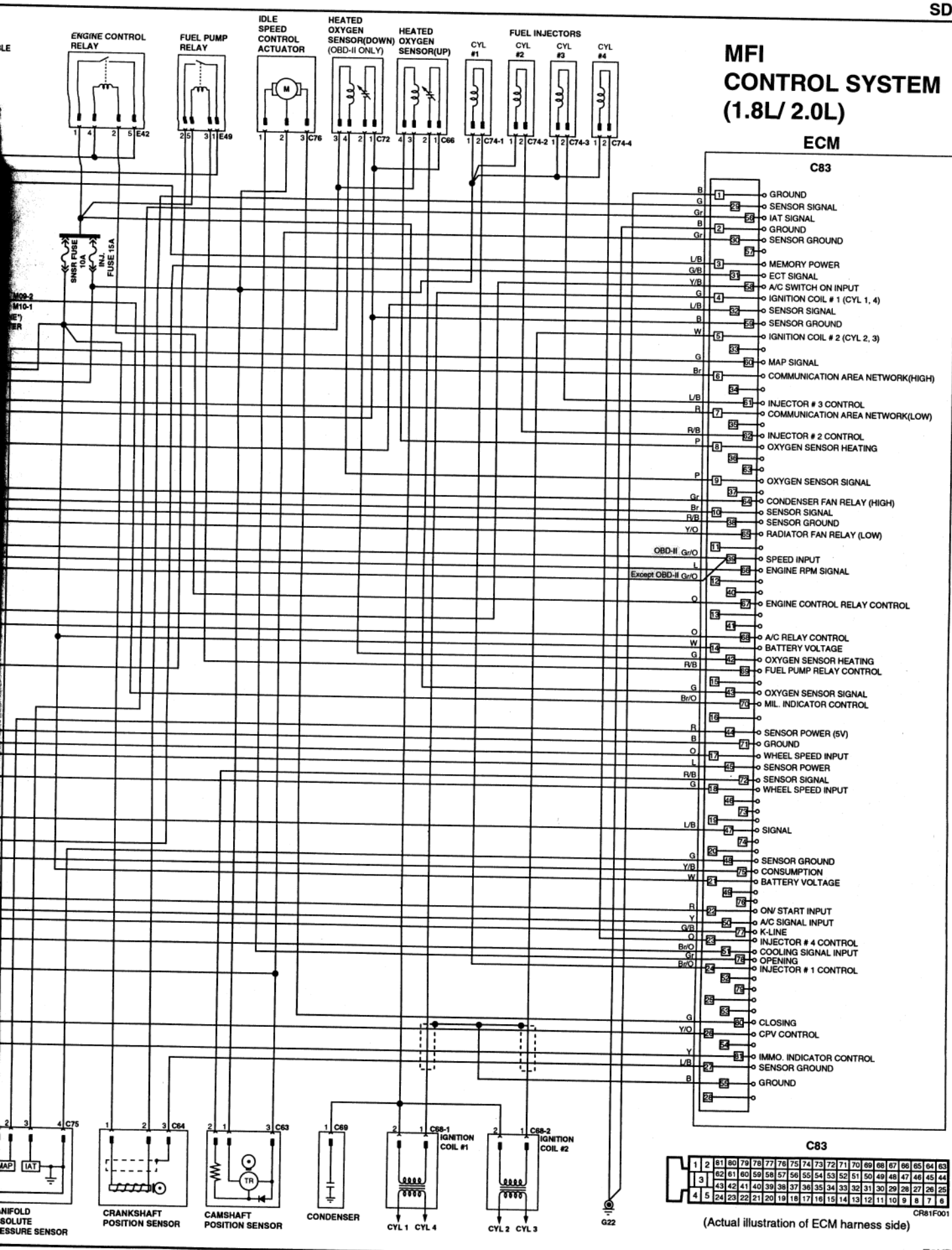
COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C61	Engine coolant temperature senser & sender	CL-19
C62	Throttle position sensor	CL-19
C63	Camshaft position sensor	CL-19
C64	Crankshaft position sensor	CL-20
C66	Heated oxygen sensor (UP)	CL-20
C68–1	Ignition coil #1	CL-20
C68–2	Ignition coil #2	CL-20
C69	Condenser	CL-20
C71	Canister purge valve	CL-20
C72	Heated oxygen sensor (DOWN) (OBD-II)	CL-20
C73	Knock sensor	CL-20
C74–1	Injector #1	CL-20
C74–2	Injector #2	CL-20
C74–3	Injector #3	CL-20
C74–4	Injector #4	CL-20
C75	Manifold absolute pressure sensor	CL-21
C76	Idle speed control actuator	CL-21
C78	A/C compressor	CL-21
C83	ECM	CL-21
C86–3	TCM	CL-21
C91	Joint connector	CL-22
E37	ABS control module	CL-12
E39	Right front wheel sensor	CL-12
E42	Engine control relay	CL-12
E49	Fuel pump relay	CL-12
E50	A/C relay	CL-12
E56	Joint connector	CL-12
E57	Joint connector	CL-12
E58	Joint connector	CL-12
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M55	Fuel sender & Fuel pump motor	CL-5

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TRIPLE SWITCH
C78
A/C COMPRESSOR
A/C RELAY
FUSIBLE LINK 100A
FUSIBLE LINK 30A
FUSIBLE LINK 20A
A/CON FUSE 10A
IGNITION SWITCH
START
ACC
ON
BATTERY GROUND
ENGINE CONTROL RELAY
FUEL PUMP RELAY
IDLE SPEED CONTROL ACTUATOR
FUSE 20 10A
FUSE 10 10A
FUSE 2 10A
SNSR FUSE 10A
INJ. FUSE 15A
A/C CONTROL MODULE
RADIATOR FAN RELAY
CONDENSER FAN RELAY. 1
(IMMO) INSTUMENT CLUSTER
(MIL "CHECK ENGINE") INSTUMENT CLUSTER
SMARTAR
(Smart Transponder Antenna)
ABS CONTROL MODULE
INSTRUMENT CLUSTER
VEHICLE SPEED SENSOR
DATA LINK CONNECTOR
TCM
MULTIPURPOSE CHECK CONNECTOR
FUEL SENDER & FUEL PUMP MOTOR
FUEL PUMP MOTOR
G04
CANISTER PURGE VALVE
RIGHT FRONT WHEEL SENSOR
(Without ABS, OBD-II)
KNOCK SENSOR
THROTTLE POSITION SENSOR
ECT SENSOR
MAP
IAT
MANIFOLD ABSOLUTE PRESSURE SENSOR
CRANKSHAFT POSITION SENSOR
CAMSHAFT POSITION SENSOR
TR

MFI CONTROL SYSTEM (1.8L/ 2.0L)



(Actual illustration of ECM harness side)

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COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
EC03	CL-13
EC04	CL-13
EM02	CL-13
I/P-B	CL-9
I/P-H	CL-5
MC04	CL-8
MC05	CL-8
MM02	CL-9
Grounds	
G04	CL-25
G22	CL-27

Circuit Description

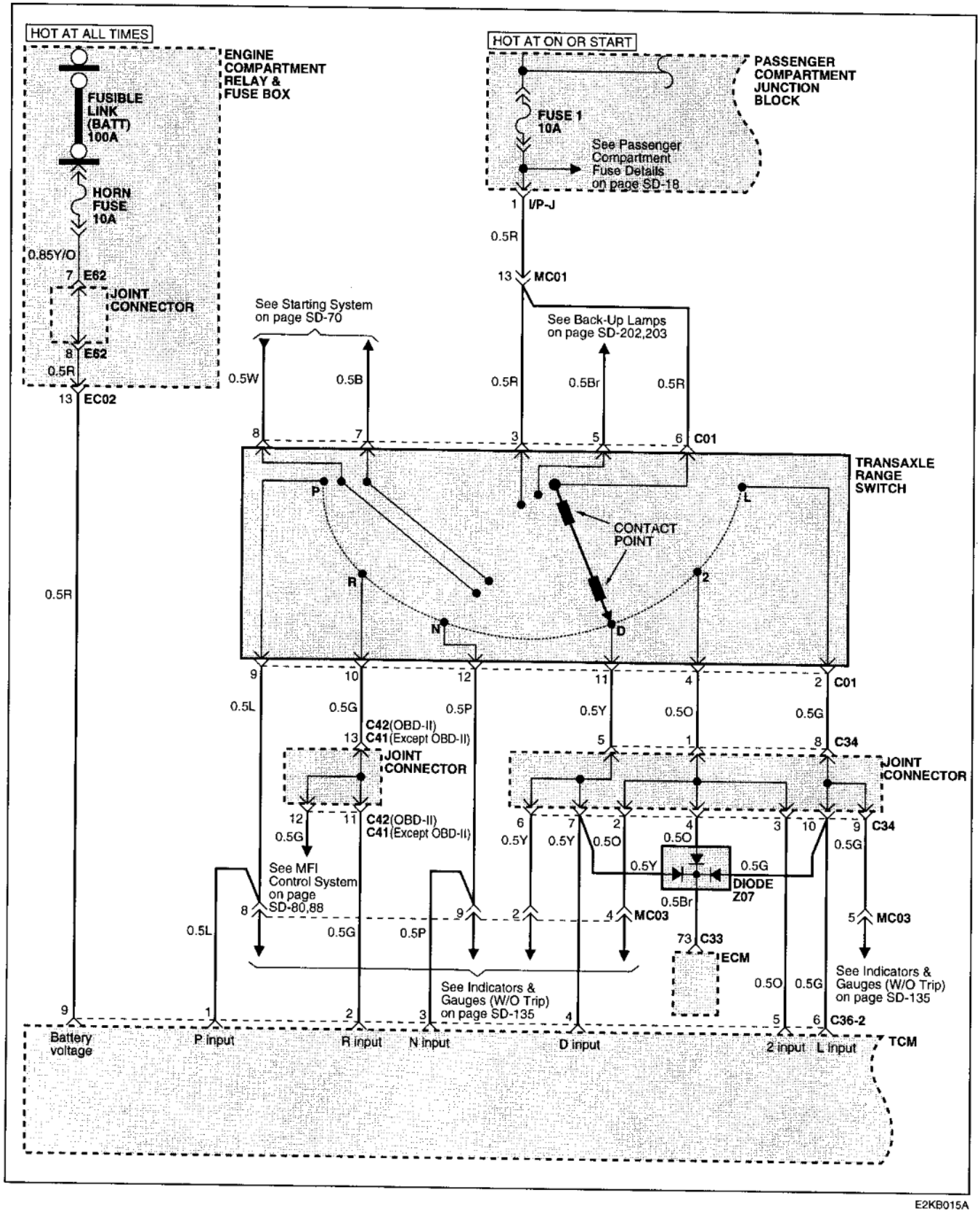
The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near inlet ports of each cylinder. The amount of fuel injection is determined by the ECM according to engine speed and intake air-flow quantity measured by sensors.

The emission control system includes oxygen sensors and catalytic converters. The MFI's three major functions are air-fuel mixture, idle speed and ignition timing control.

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AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.6L) E2KB0150

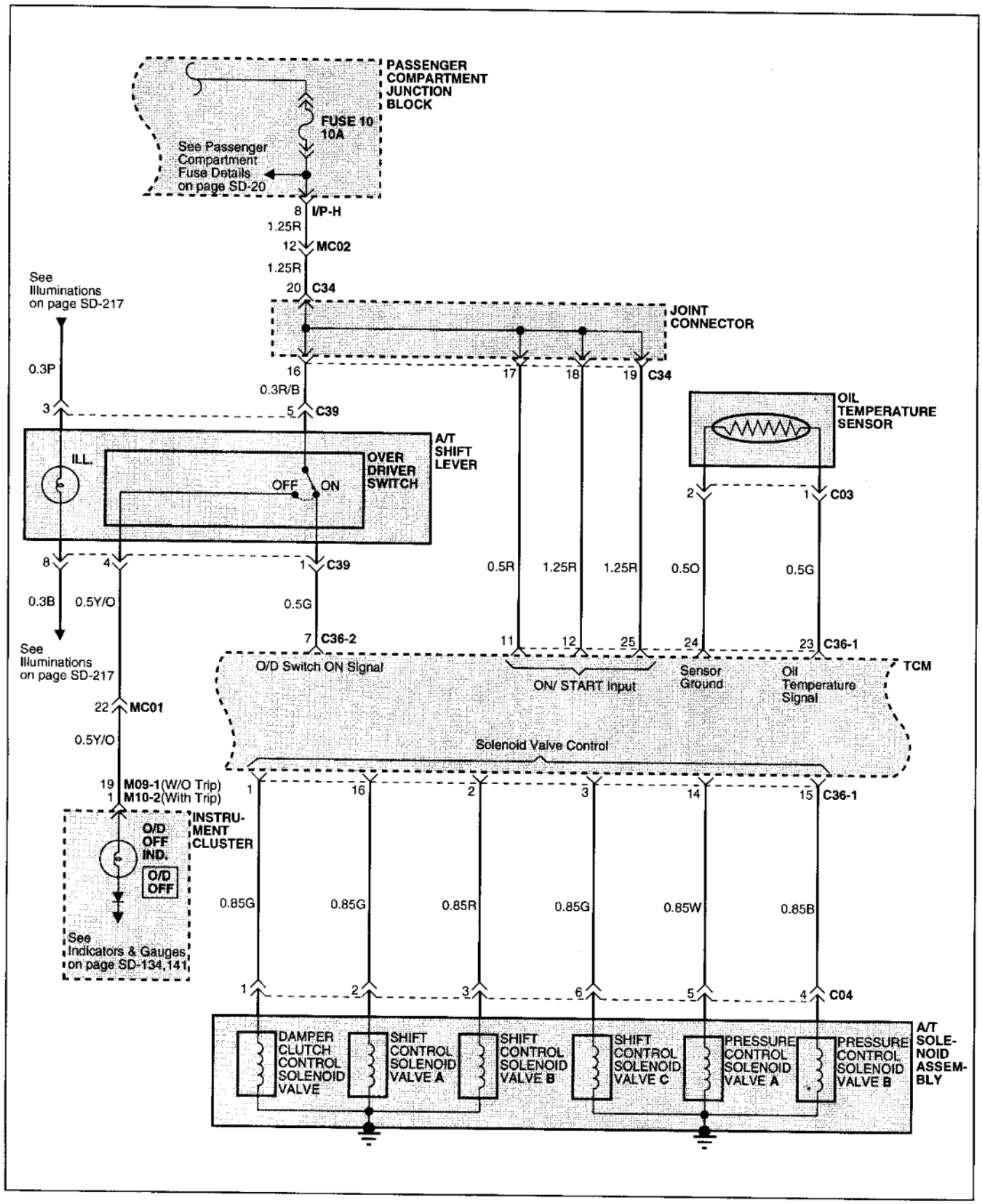
AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.6L) (1)



E2KB015A

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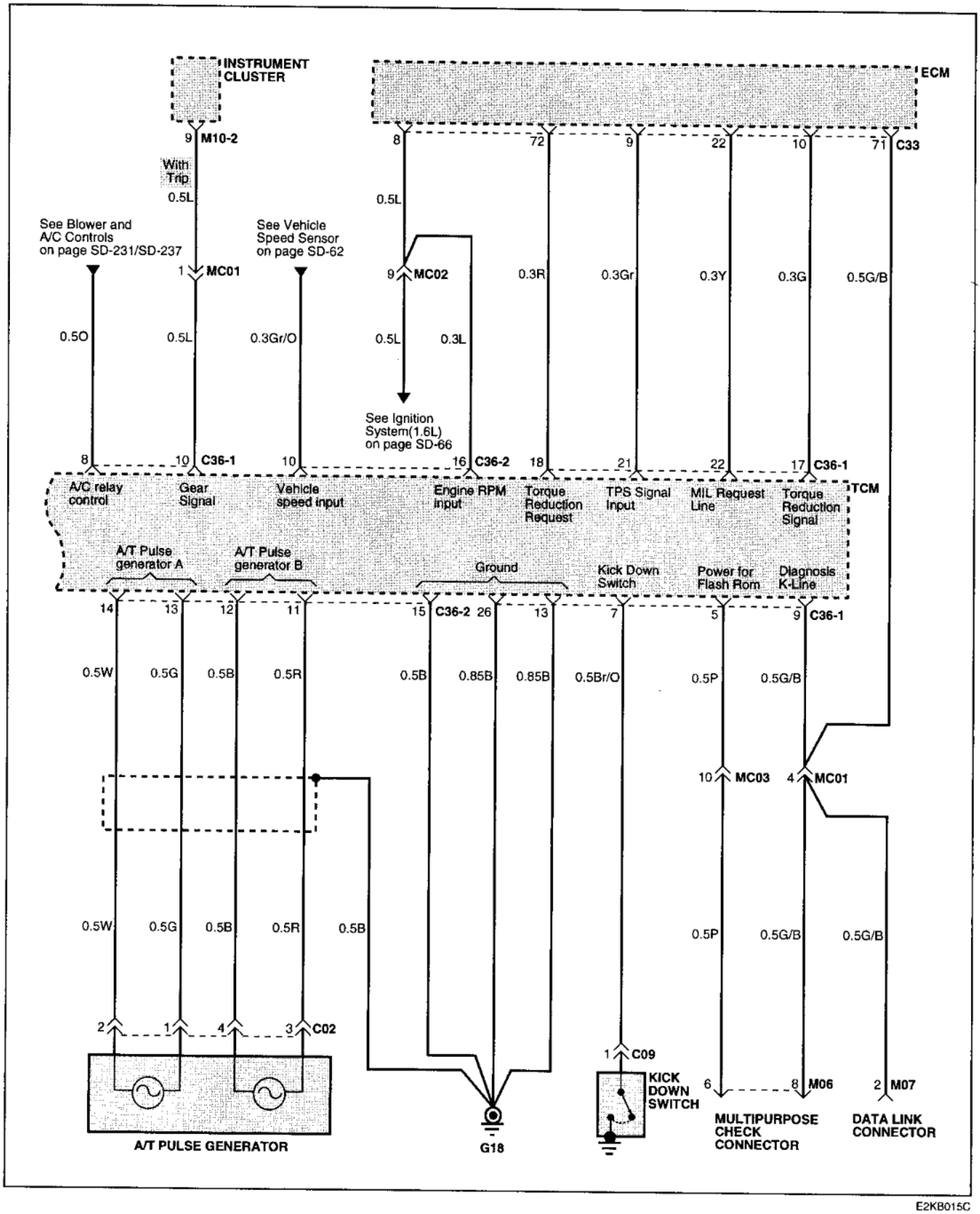
AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.6L) (2)



E2KB015B

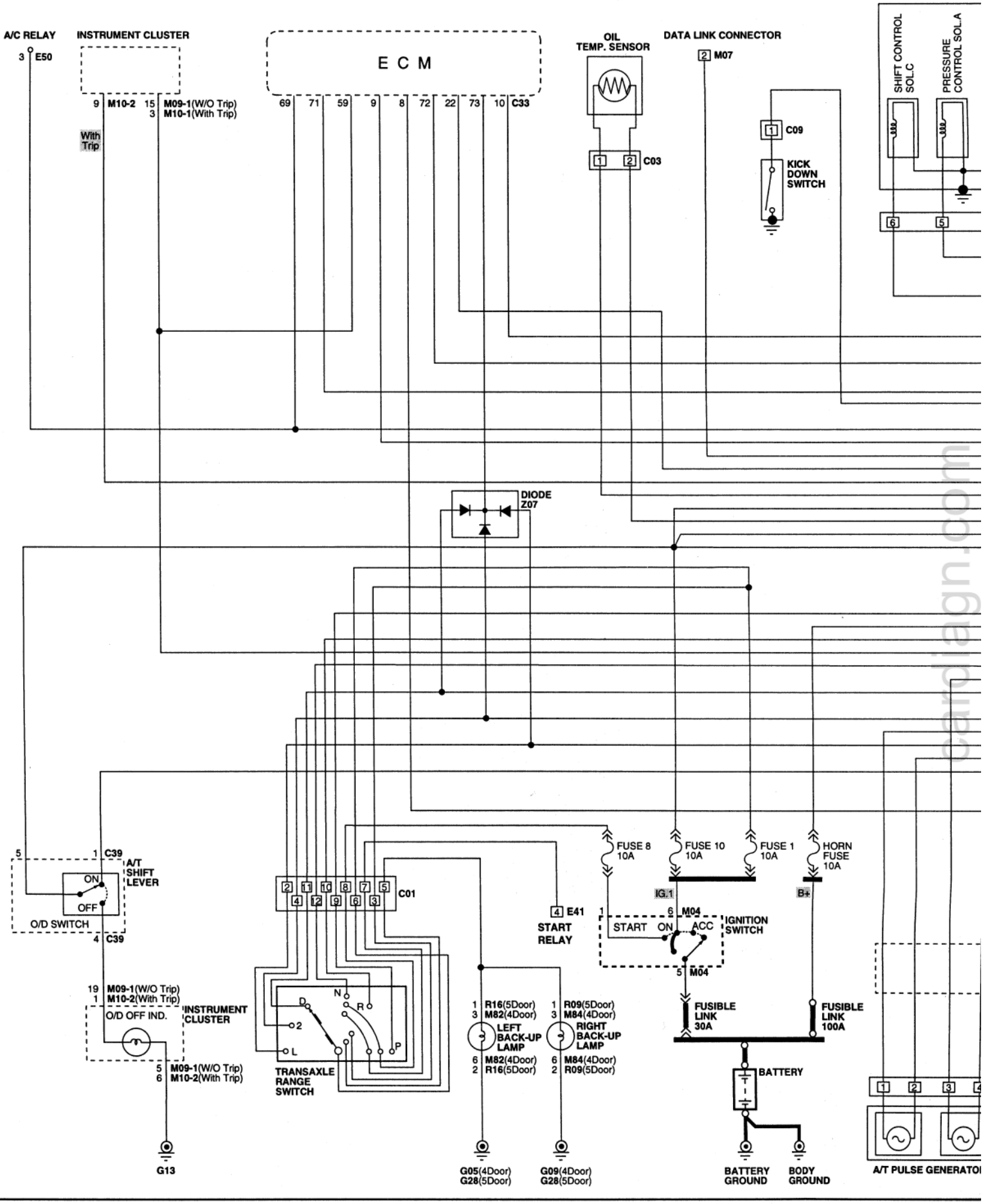
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AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.6L) (3)

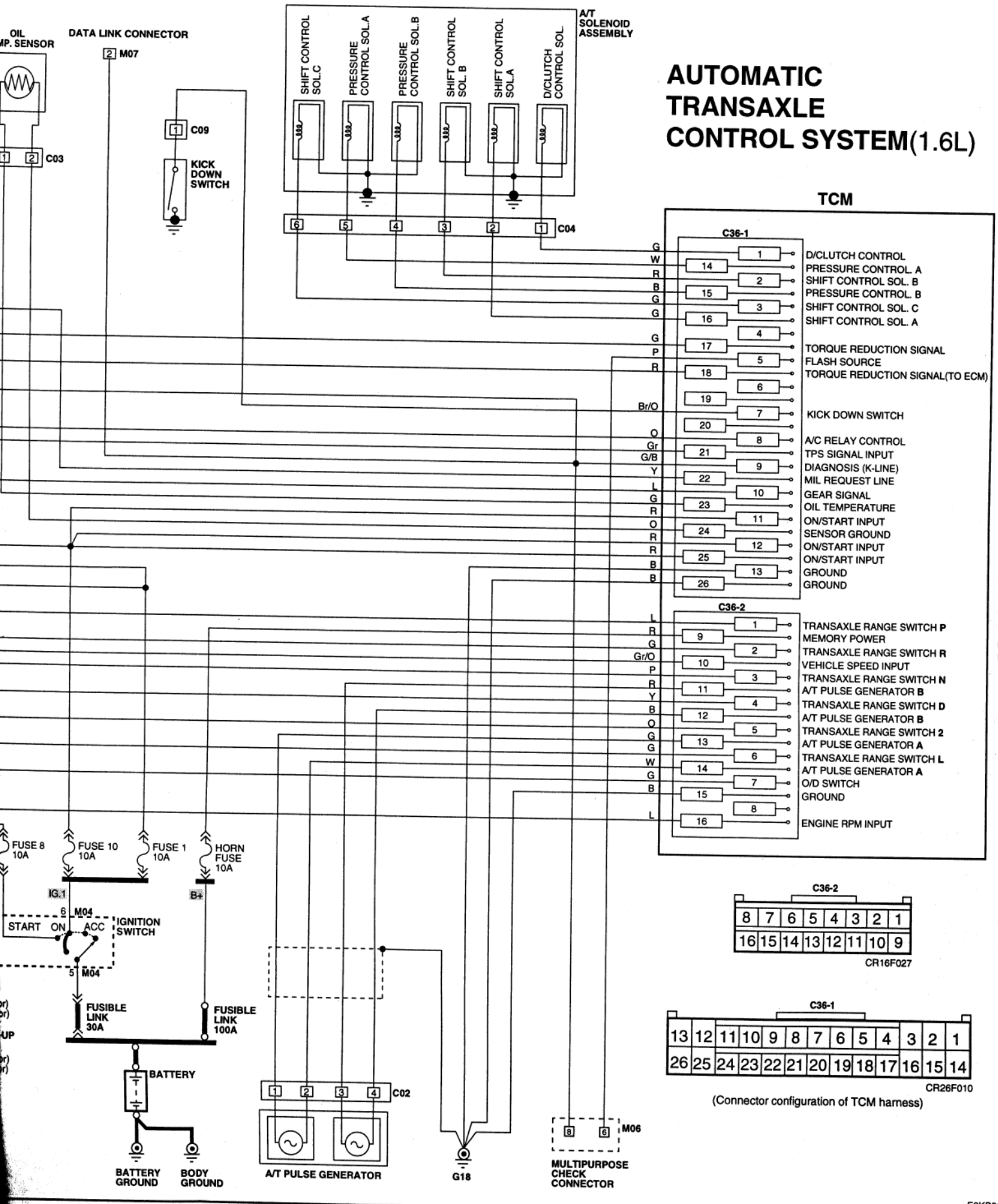


E2KB015C

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A/C RELAY
3 E50
INSTRUMENT CLUSTER
9 M10-2 15 M09-1(W/O Trip)
3 M10-1(With Trip)
With Trip
E C M
69 71 59 9 8 72 22 73 10 C33
OIL TEMP. SENSOR
1 2 C03
DATA LINK CONNECTOR
2 M07
1 C09
KICK DOWN SWITCH
SHIFT CONTROL SOL.C
PRESSURE CONTROL SOL.A
6 5
DIODE Z07
5 1 C39
A/T SHIFT LEVER
ON
OFF
O/D SWITCH
4 C39
2 11 10 8 7 5
4 12 9 6 3 C01
4 E41
START RELAY
FUSE 8 10A
FUSE 10 10A
FUSE 1 10A
HORN FUSE 10A
IG.1
B+
1 6 M04
START ON ACC
IGNITION SWITCH
5 M04
19 M09-1(W/O Trip)
1 M10-2(With Trip)
O/D OFF IND.
INSTRUMENT CLUSTER
5 M09-1(W/O Trip)
6 M10-2(With Trip)
N
D
R
2
L
P
TRANSAXLE RANGE SWITCH
1 R16(5Door)
3 M82(4Door)
LEFT BACK-UP LAMP
6 M82(4Door)
2 R16(5Door)
1 R09(5Door)
3 M84(4Door)
RIGHT BACK-UP LAMP
6 M84(4Door)
2 R09(5Door)
FUSIBLE LINK 30A
FUSIBLE LINK 100A
BATTERY
G13
G05(4Door)
G28(5Door)
G09(4Door)
G28(5Door)
BATTERY GROUND
BODY GROUND
A/T PULSE GENERATOR
1 2 3 4

AUTOMATIC TRANSAXLE CONTROL SYSTEM(1.6L)



(Connector configuration of TCM harness)

E2KB015D

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch	CL-16
C02	A/T pulse generator	CL-16
C03	Oil temperature sensor	CL-16
C04	A/T solenoid assembly	CL-16
C09	Kick down switch	CL-16
C33	ECM	CL-18
C34	Joint connector	CL-18
C36–1	TCM	CL-18
C36–2	TCM	CL-18
C39	A/T shift lever	CL-18
C41	Joint connector	CL-18
C42	Joint connector	CL-18
E62	Joint connector	CL-12
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–2	Instrument cluster (With Trip)	CL-3
Connectors		
EC02		CL-13
I/P-H		CL-9
I/P-J		CL-9
MC01		CL-8
MC02		CL-8
MC03		CL-8
Ground		
G18		CL-26

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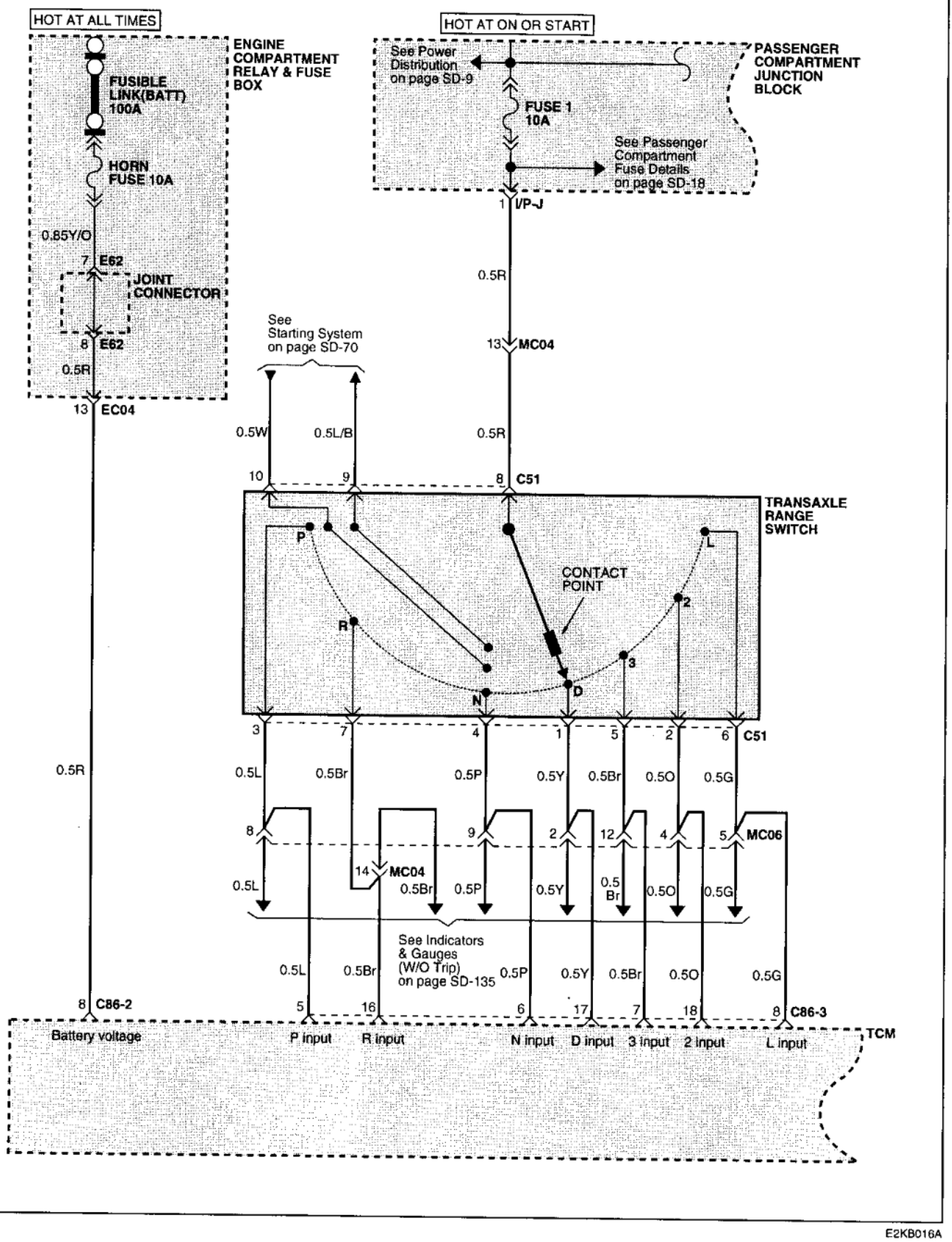
Circuit Description

The Transaxle Control Module (TCM) provides precise gear shift timing and torque converter lock-up by controlling the operation of the automatic transaxle solenoid valves (Damper clutch control solenoid valve, shift control solenoid valve A, B, C and oil pressure control solenoid valve A, B).

The TCM operates these solenoid valves based on input signals from the various sensors (for instance, pulse generator A, B). The transaxle control module has a built-in self diagnostic feature. Refer to the Shop Manul, section ATM, for details.

AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.8L/2.0L) E2KB0160

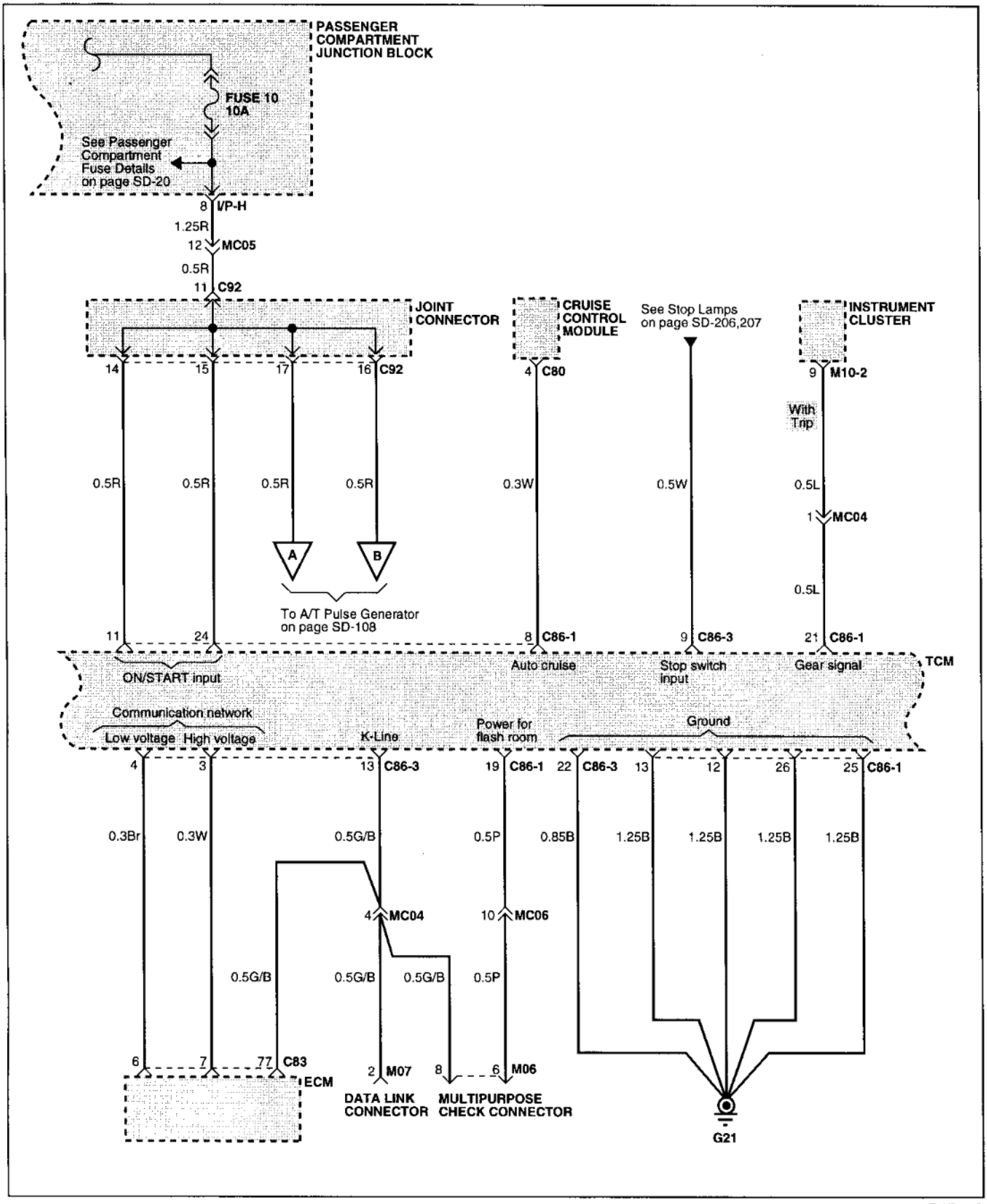
AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.8L/2.0L) (1)



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E2KB016A

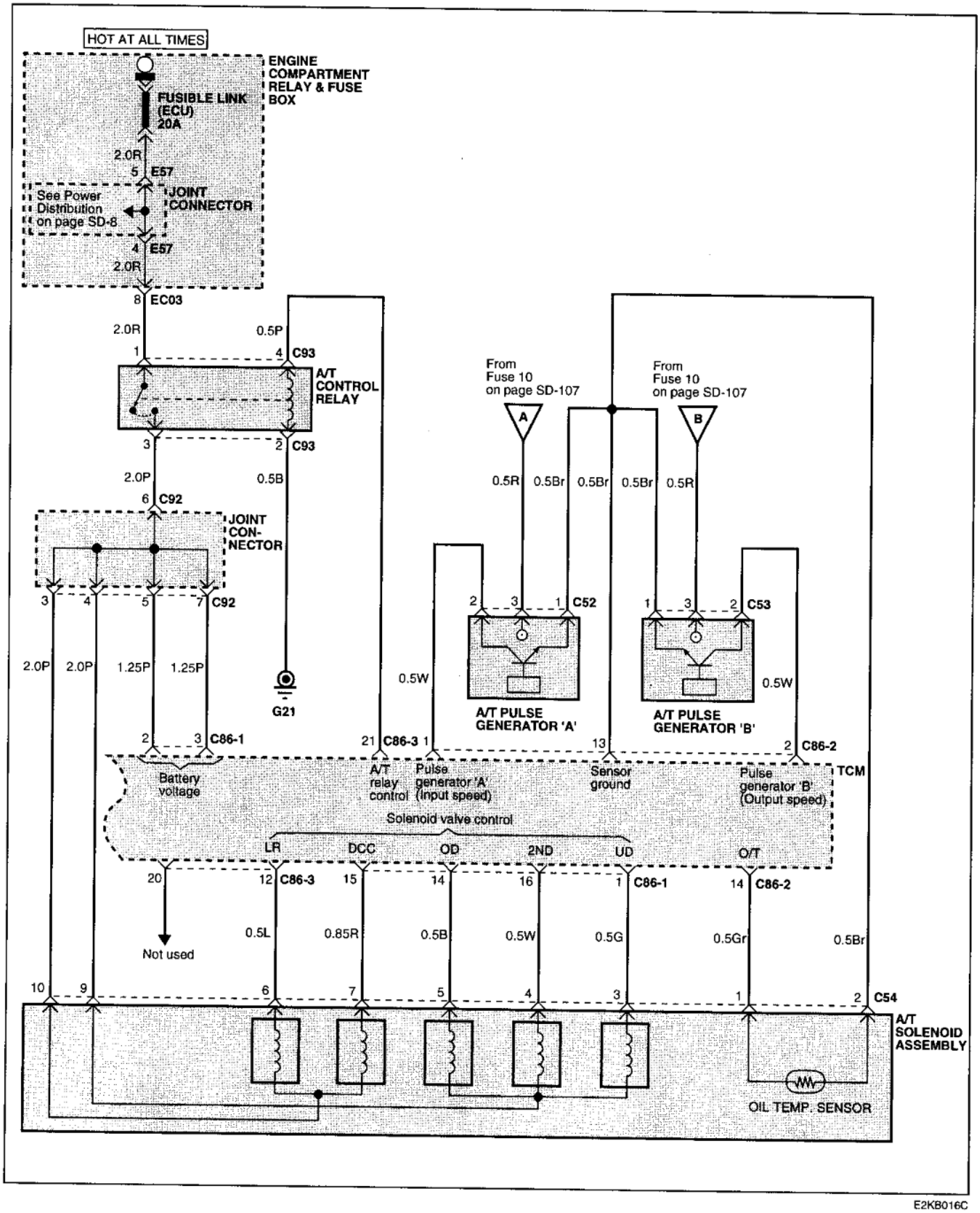
AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.8L/2.0L) (2)



E2KB016B

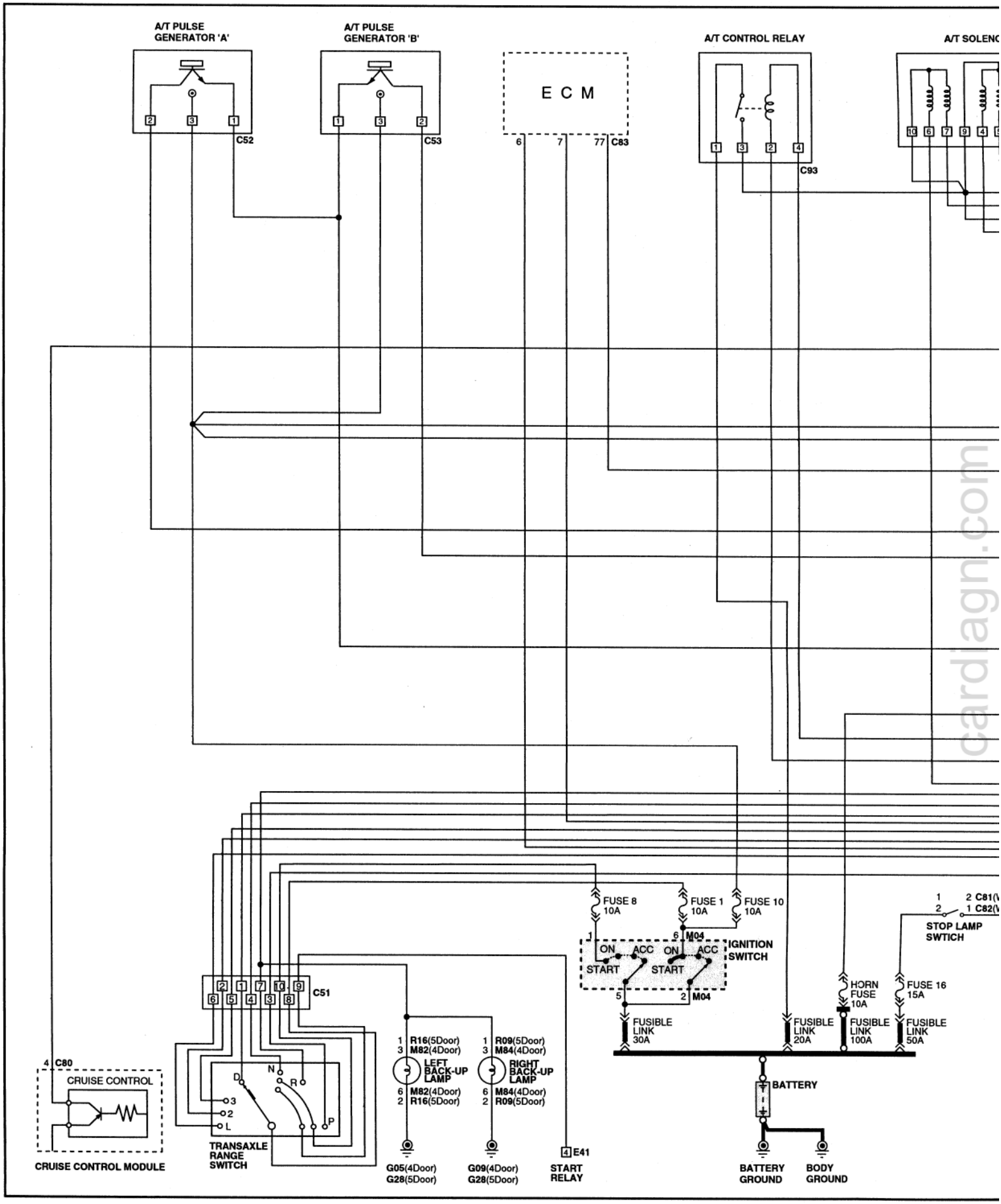
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AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.8L/2.0L) (3)

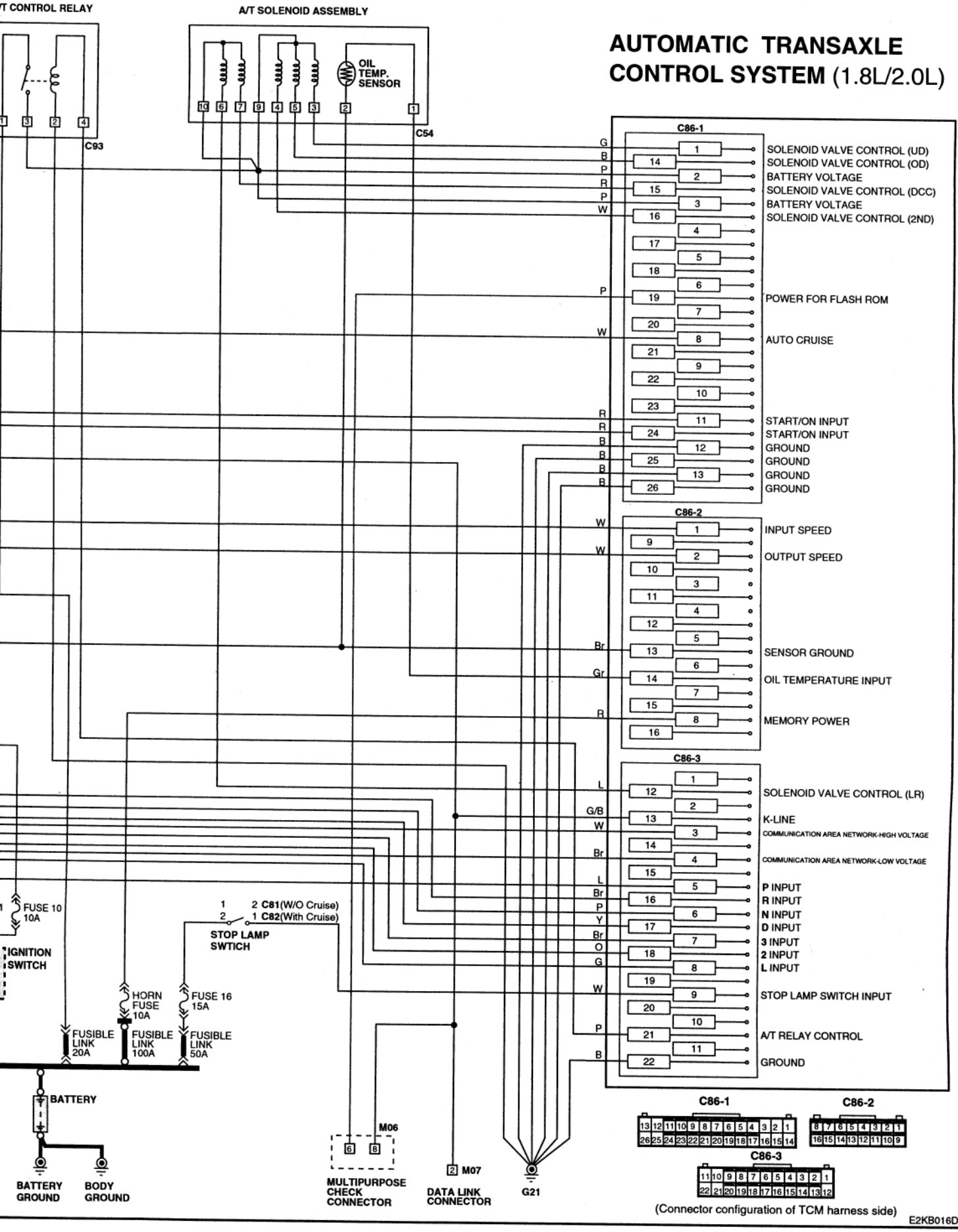


E2KB016C

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A/T PULSE GENERATOR 'A'
A/T PULSE GENERATOR 'B'
E C M
A/T CONTROL RELAY
C52
C53
C83
C93
6
7
77
FUSE 8 10A
FUSE 1 10A
FUSE 10 10A
IGNITION SWITCH
ON
ACC
START
M04
STOP LAMP SWTICH
C51
C80
CRUISE CONTROL
CRUISE CONTROL MODULE
TRANSAXLE RANGE SWITCH
R16(5Door)
M82(4Door)
LEFT BACK-UP LAMP
M82(4Door)
R16(5Door)
R09(5Door)
M84(4Door)
RIGHT BACK-UP LAMP
M84(4Door)
R09(5Door)
G05(4Door)
G28(5Door)
G09(4Door)
G28(5Door)
E41
START RELAY
FUSIBLE LINK 30A
FUSIBLE LINK 20A
HORN FUSE 10A
FUSIBLE LINK 100A
FUSE 16 15A
FUSIBLE LINK 50A
BATTERY
BATTERY GROUND
BODY GROUND

AUTOMATIC TRANSAXLE CONTROL SYSTEM (1.8L/2.0L)



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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C51	Transaxle range switch	CL-18
C52	A/T pulse generator 'A'	CL-18
C53	A/T pulse generator 'B'	CL-18
C54	A/T solenoid assmebly	CL-18
C80	Cruise control module	CL-21
C83	ECM	CL-21
C86–1	TCM	CL-21
C86–2	TCM	CL-21
C86–3	TCM	CL-21
C92	Joint connector	CL-22
C93	Joint connector	CL-22
E57	Joint connector	CL-12
E62	Joint connector	CL-12
M06	Multipurpose check connector	CL-2
M07	Data link connector	CL-2
M10–2	Instrument cluster (With Trip)	CL-3
Connectors		
EC03		CL-13
EC04		CL-13
I/P-H		CL-9
I/P-J		CL-9
MC04		CL-8
MC05		CL-8
MC06		CL-8
Ground		
G21		CL-27

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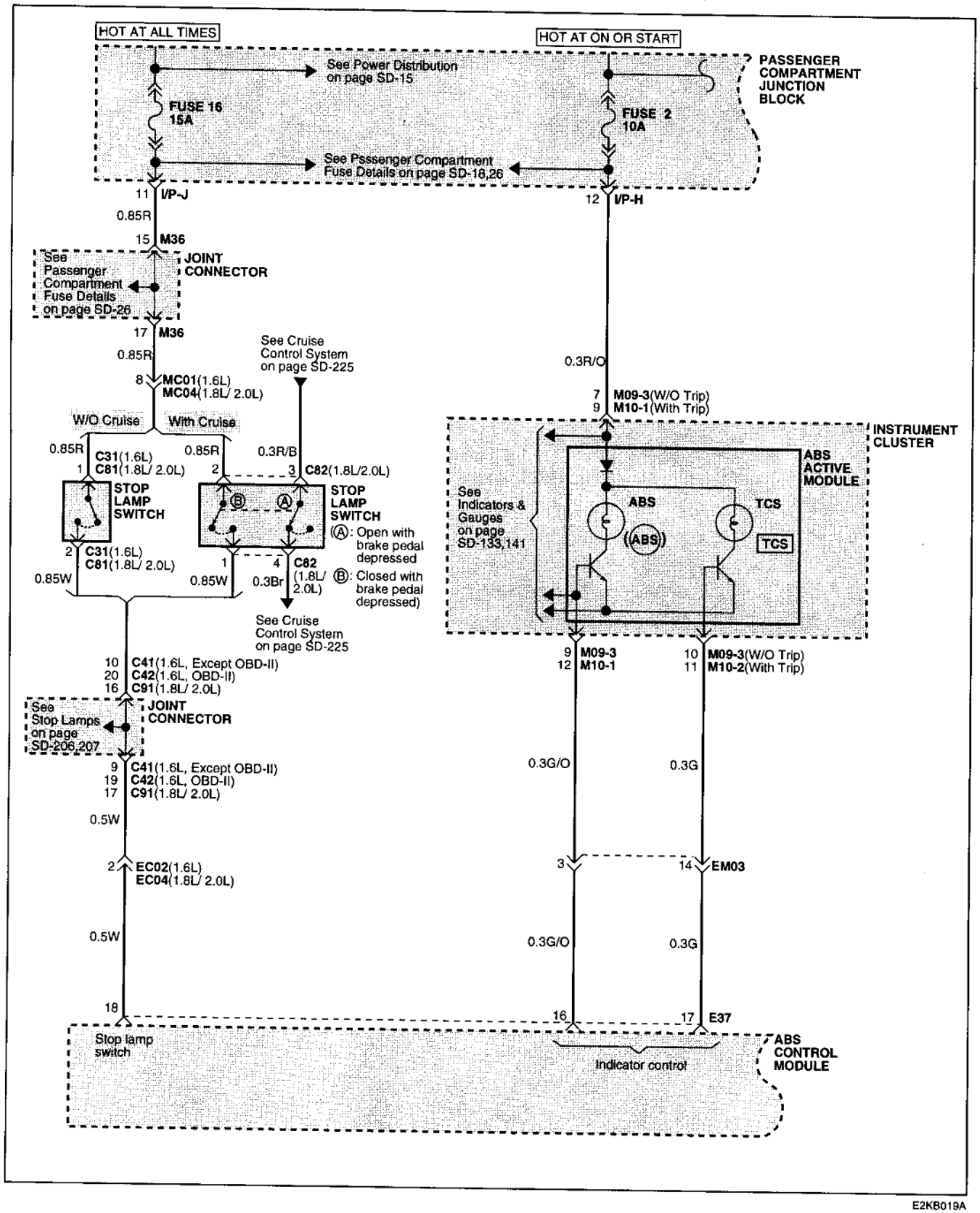
Circuit Description

The Transaxle Control Module (TCM) provides precise gear shift timing and torque converter lock-up by controlling the operation of the automatic transaxle solenoid valves (Low & reverse solenoid valve,damper clutch control solenoid valve, over-drive solenoid valve, 2nd solenoid valve and under-driver solenoid valve).

The TCM operates these solenoid valves based on input signals from the various sensors (for instance, pulse generator A, B). The transaxle control module has a built-in self diagnostic feature. Refer to the Shop Manul, section ATM, for details.

ANTI-LOCK BRAKE SYSTEM / TRACTION CONTROL SYSTEM E2KB0190

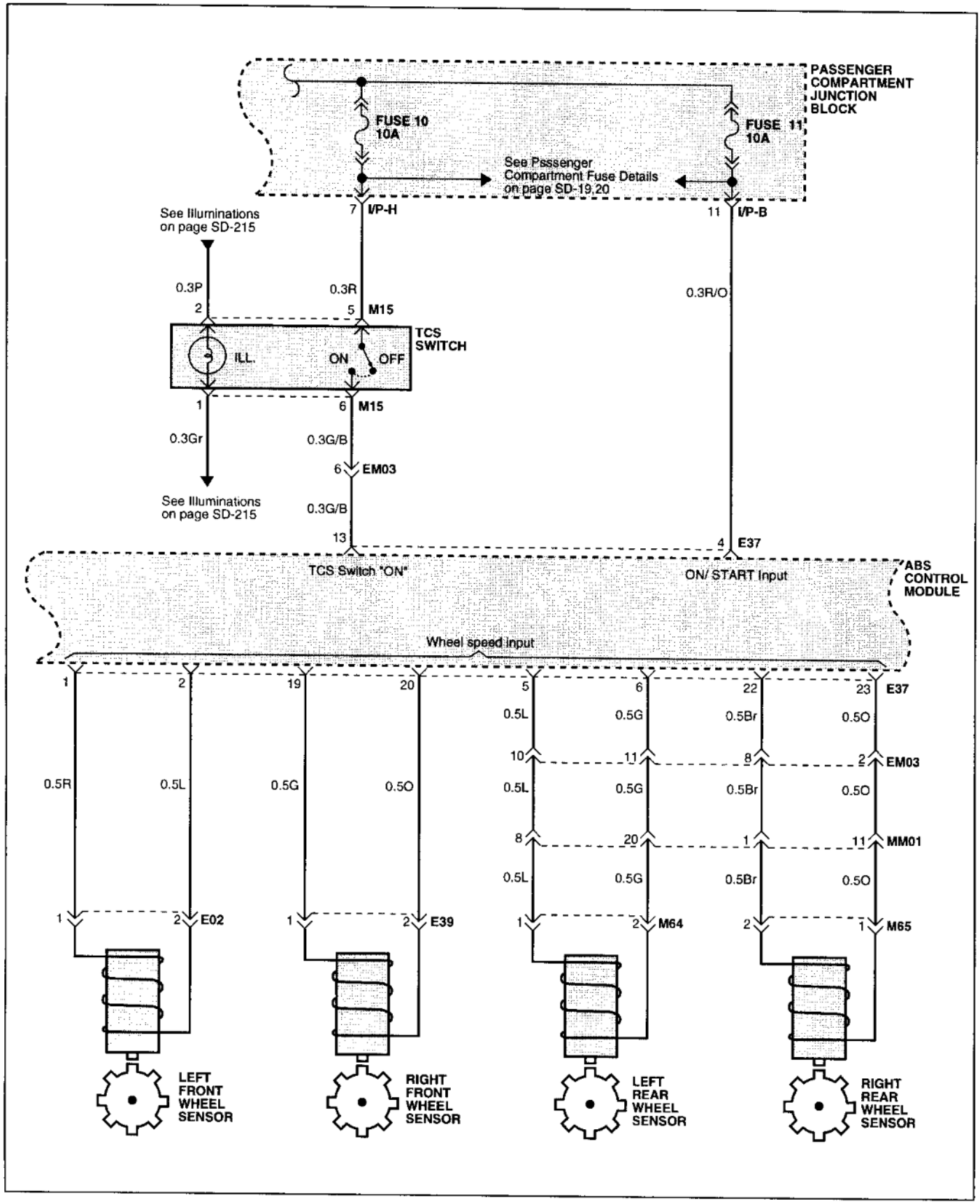
ANTI-LOCK BRAKE SYSTEM / TRACTION CONTROL SYSTEM (1)



E2KB019A

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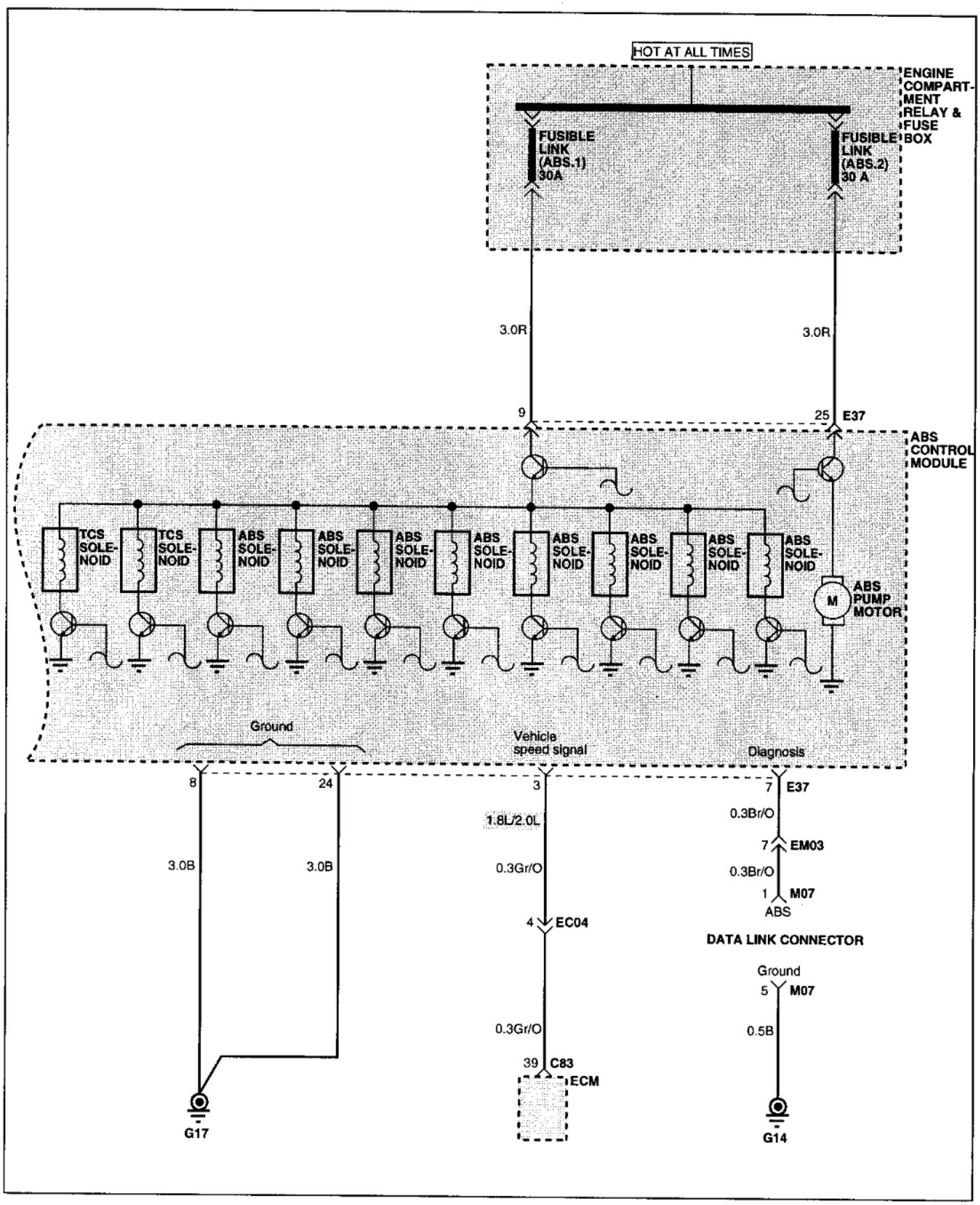
ANTI-LOCK BRAKE SYSTEM / TRACTION CONTROL SYSTEM (2)



E2KB019B

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ANTI-LOCK BRAKE SYSTEM / TRACTION CONTROL SYSTEM (3)



E2KB019C

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C31	Stop lamp switch (W/O Cruise, 1.6L)	CL-18
C41	Joint connector (1.6L, Except OBD-II)	CL-18
C42	Joint connector (1.6L, OBD-II)	CL-18
C81	Stop lamp switch (W/O cruise, 1.8L/2.0L)	CL-21
C82	Stop lamp switch (With cruise, 1.8L/2.0L))	CL-21
C83	ECM (1.8L/2.0L)	CL-21
C91	Joint connector (1.8L/2.0L)	CL-22
E02	Left front wheel sensor	CL-10
E37	ABS control module	CL-12
E39	Right front wheel sensor	CL-12
M07	Data link connector	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (Wirh Trip)	CL-3
M15	TCS switch	CL-3
M36	Joint connector	CL-4
M64	Left rear wheel sensor	CL-6
M65	Right rear wheel sensor	CL-6
Connectors		
I/P-B		CL-9
I/P-H		CL-9
I/P-J		CL-9
EM03		CL-13
MC01		CL-8
MC04		CL-8
MM01		CL-9
Grounds		
G14		CL-26
G17		CL-26

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Circuit Description

TCS

The Traction Control System (TCS)is a variable system designed to enhance traction during acceleration and cornering. It does so by determining the optimum amount of wheel spin for any given driving situation, then suppressing surplus engine power accordingly.

The ABS control module gets signals about the vehicle's speed, direction and road conditions from sensors at the wheels and the steering column.

Based on these signals, the control module will determine the optimum amount of wheel spin. Because the system is variable, the control module may determine, depending on the driving conditions, that some wheel spin is beneficial (thus enhancing straight-line acceleration), or that no wheel spin is beneficial (thus enhancing cornering). For any given driving situation, the control module will determine the amount of wheel spin best suited to the driver's needs. The system is automatically ready whenever the engine is started, but can be manually canceled with the TCS switch.

The TCS provides the following benefits:

(1) When the drive wheel speed exceeds the vehicle speed by a given amount, the ABS control module judges that the drive wheels are slipping and it sends traction control signals to reduce engine power.

(2) Based on the wheel speed sensor signals, the control module detects the condition of the road and then sends signals to improve acceleration efficiency and grip efficiency.

ABS

The Anti-Lock Brake System (ABS) control module controls the hydraulic brake pressure of all four wheels during sudden braking and braking on hazardous road surfaces, preventing the wheels from locking.

The ABS provides the following benefits:

(1) Enables steering around obstacles with a greater degree of certainty during panic braking.

(2) Enables stopping during panic braking while allowing stability and control even on curves.

In case a malfunction occurs in the ABS system, the system will operate as a normal brake system (fail-safe mode).

A diagnosis function and fail-safe system have been included for serviceability.

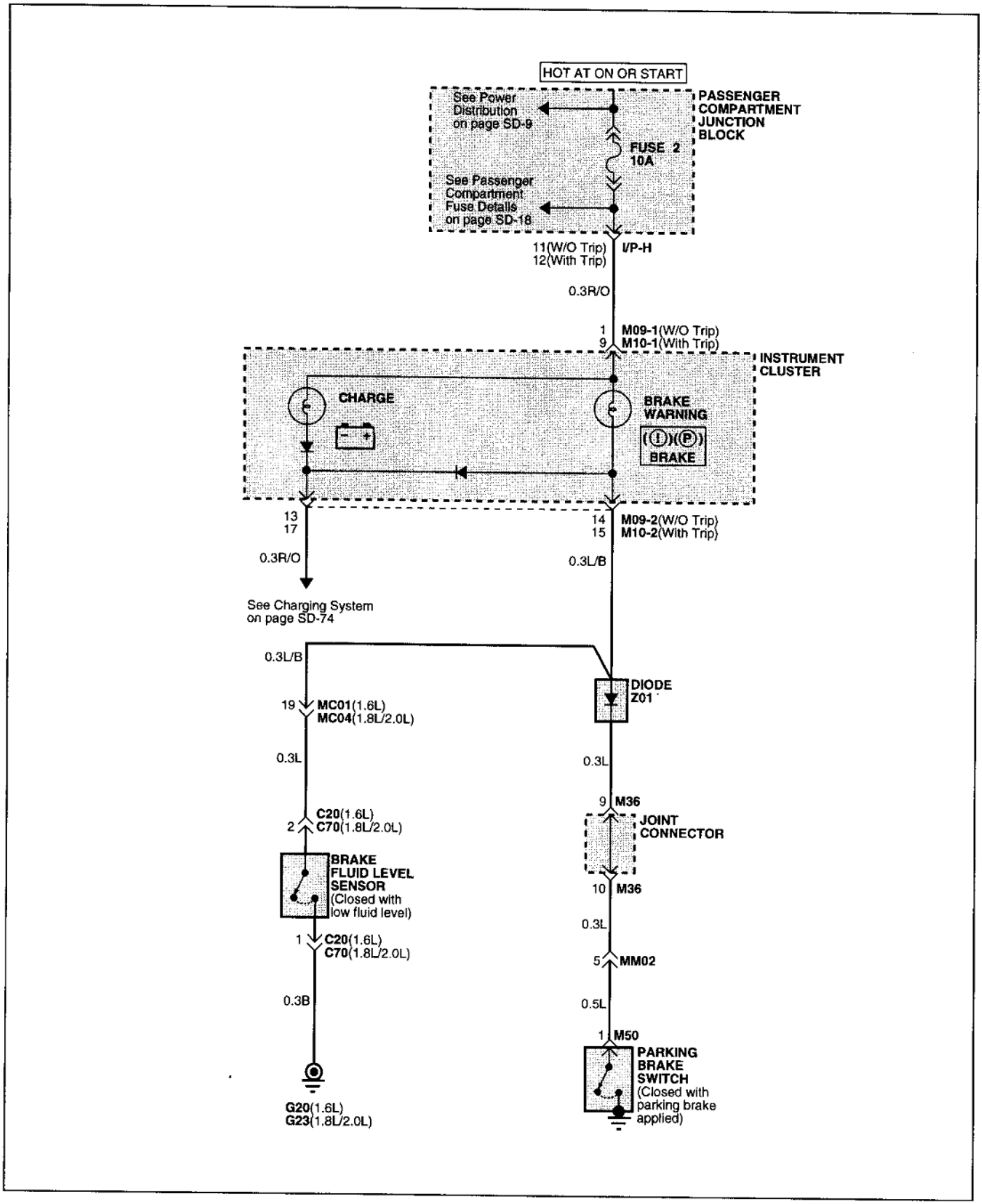
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MEMO

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BRAKE WARNING SYSTEM E2KB0200

BRAKE WARNING SYSTEM (1)



E2KB020A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C20	Brake fluid lever sensor (1.6L)	CL-17
C70	Brake fluid lever sensor (1.8L/2.0L)	CL-20
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M36	Joint connector	CL-4
M50	Parking brake switch	CL-5
Connectors		
I/P-H		CL-9
MC01		CL-8
MC04		CL-8
MM02		CL-9
Grounds		
G20		CL-26
G23		CL-27

Circuit Description

The brake warning light goes on to alert the driver that the parking brake is applied or that the brake fluid level is low. It also lights as a bulb test when the engine is cranked.

Parking Brake

With the ignition switch in ON or START, battery voltage is applied from fuse 2 to the brake warning light. When the parking brake is applied, the switch closes and provides a ground for the light. The brake warning light goes on to remind the driver that the parking brake is applied.

Brake Fluid Level

With the ignition switch in ON or START, battery voltage is applied from fuse 2 to the brake warning light. If the brake fluid level is low, the brake fluid level switch closes and ground is provided to the circuit. The brake warning light goes on to warn the driver of a low brake fluid level in the brake master cylinder.

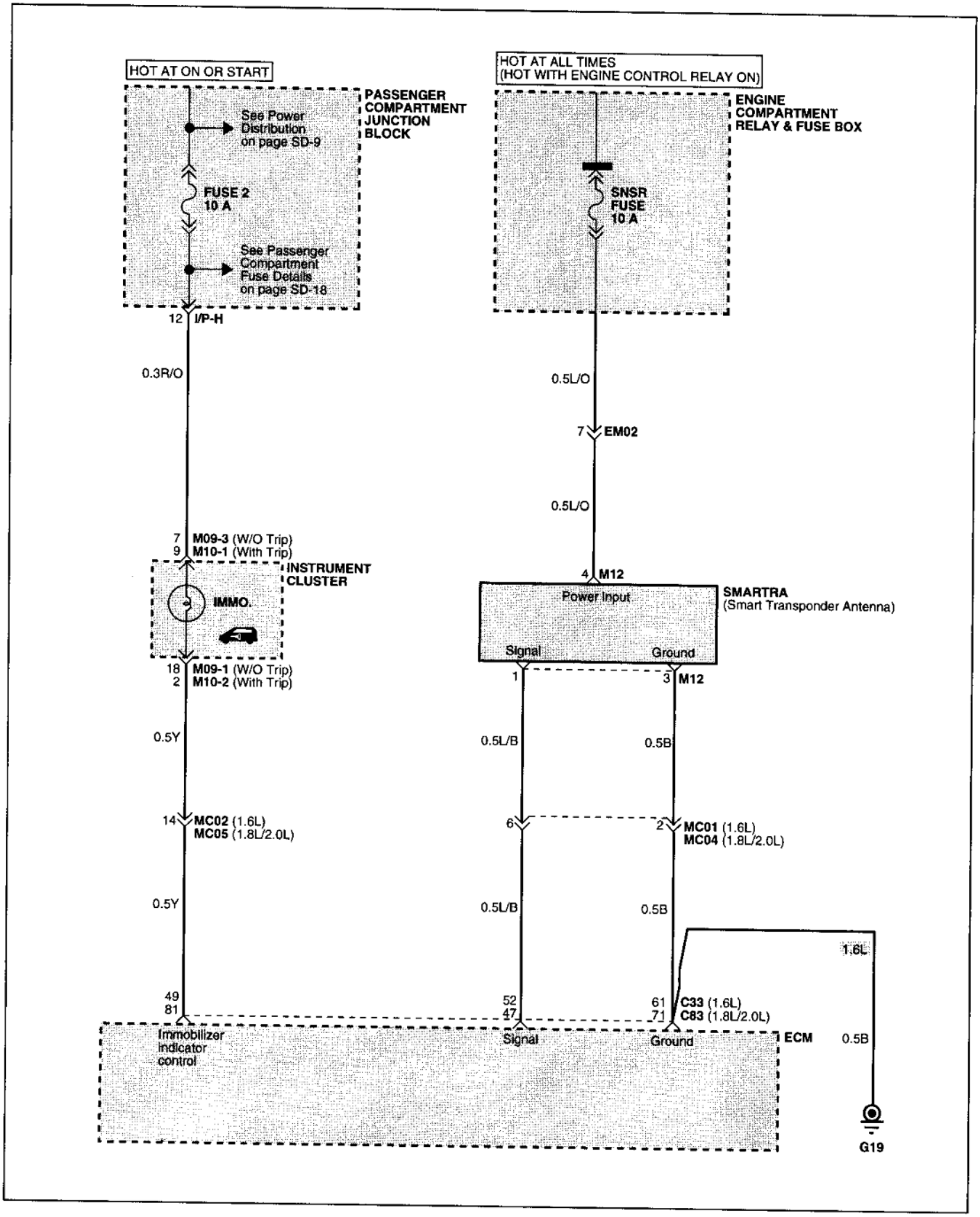
Bulb Check

With the ignition switch in ON or START, battery voltage is applied to the brake warning light from fuse 2. The generator provides ground to the circuit until the engine is running. The brake warning light goes on to test the brake warning light bulb and then goes off.

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IMMOBILIZER CONTROL SYSTEM E2KB0210

IMMOBILIZER CONTROL SYSTEM (1)



E2KB021A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C33	ECM (1.6L)	CL-18
C83	ECM (1.8L/2.0L)	CL-21
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
Connectors		
EM02		CL-13
I/P-H		CL-9
MC01		CL-8
MC02		CL-8
MC04		CL-8
MC05		CL-8
Ground		
G19		CL-26

Circuit Description

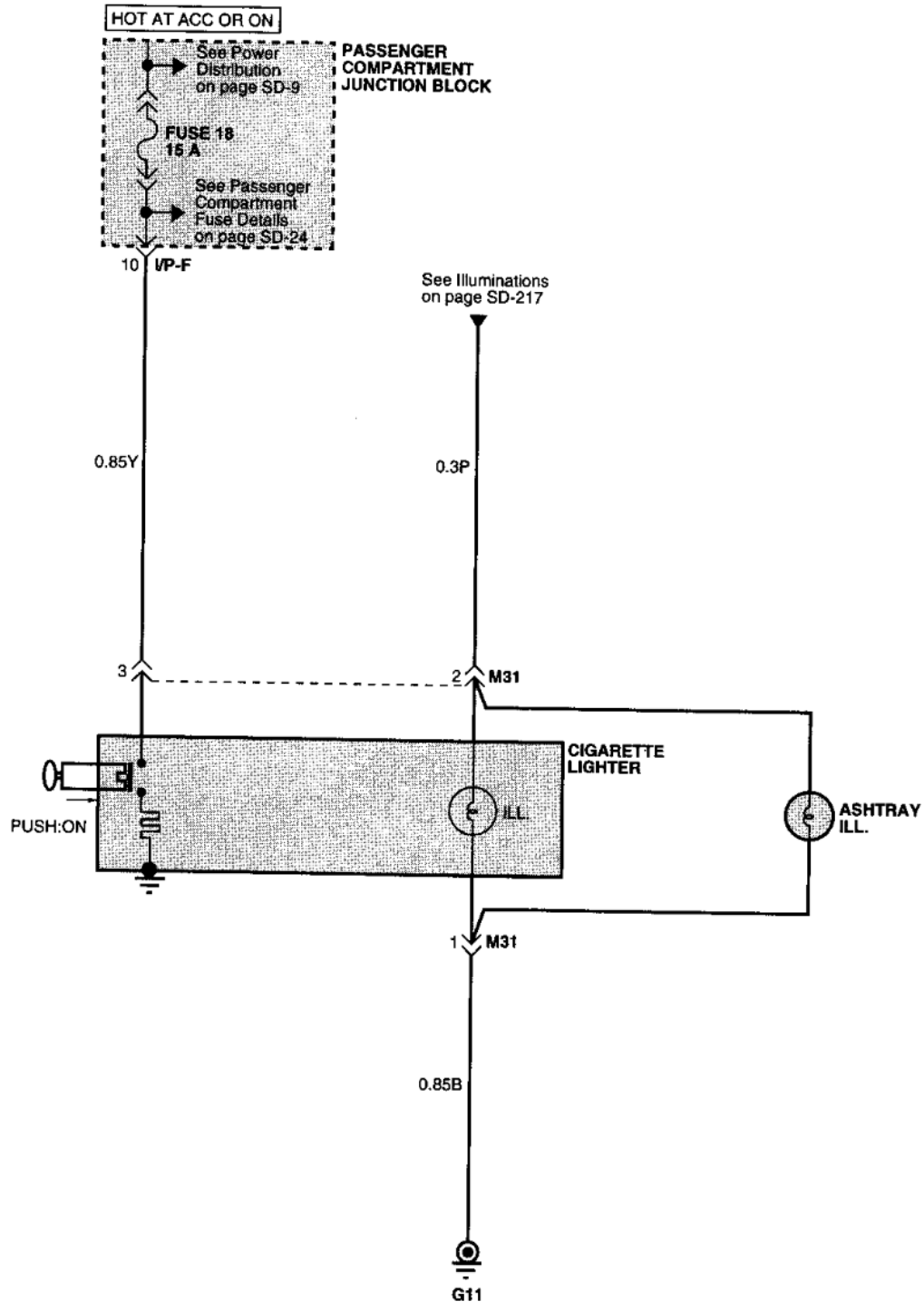
The Immobilizer Control System (ICS) is an anti-theft device that enables starting to be possible only when the mechnical and wireless secret code (memorized in the ECM and SMARTRA), are aligned simultaneously.
The transponder (built -in the ignition key head) sends a unique frequency code signal to the SMARTRA (SMARt TRansponder Antenna).

The SMARTRA compares the received signal with the memorized code and communicates with the ECM, controls the engine management system through fuel injection control, via a dedicated communication line. When the code is aligned, the ECM sends a starting signal and the engine starts.

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CIGARETTE LIGHTER E2KB0220

CIGARETTE LIGHTER (1)



E2KB022A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
M31	Cigarette lighter	CL-4
Ground		
G11		CL-25

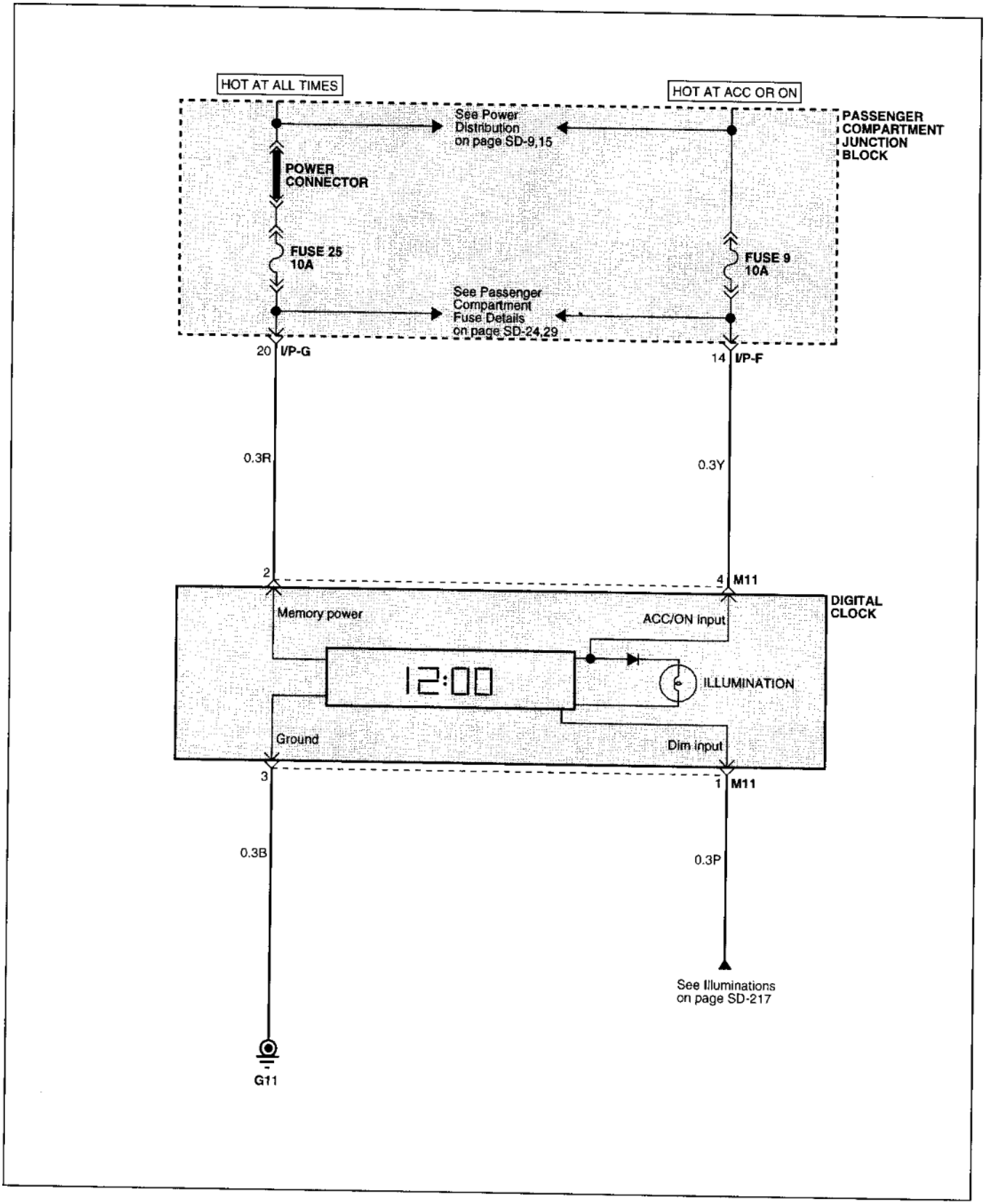
Circuit Description

With the ignition switch in ACC or ON, battery voltage is applied from fuse 18 to the cigarette lighter. When you depress (push) the lighter, the lighter element completes the circuit to ground. When the element becomes sufficiently heated, it is spring- released and the circuit opens.

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DIGITAL CLOCK E2KB0230

DIGITAL CLOCK (1)



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E2KB023A

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
M11	Digital clock	CL-3
Connectors		
I/P-F		CL-9
I/P-G		CL-9
Ground		
G11		CL-25

Circuit Description

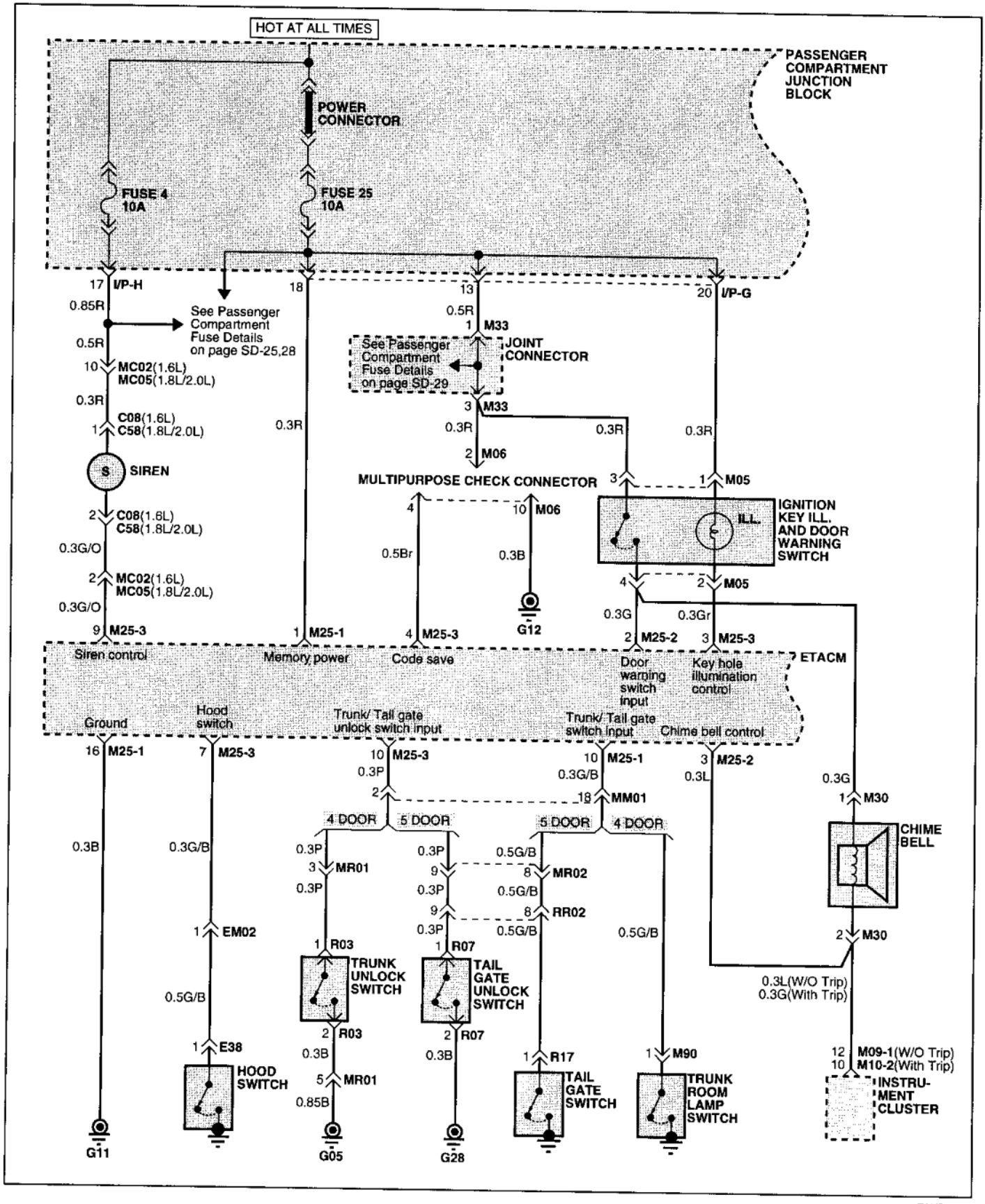
Battery voltage is applied at all times to the digital clock from fuse 25 to provide clock memory. With the igniton switch in ACC or ON, battery voltage is applied to the clock through fuse 9. The digital clock lights up and displays the time.

With the light switch in PARK or HEAD, the light switch provides ground to the digital clock and the digital clock's display will dim.

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ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) E2KB0240

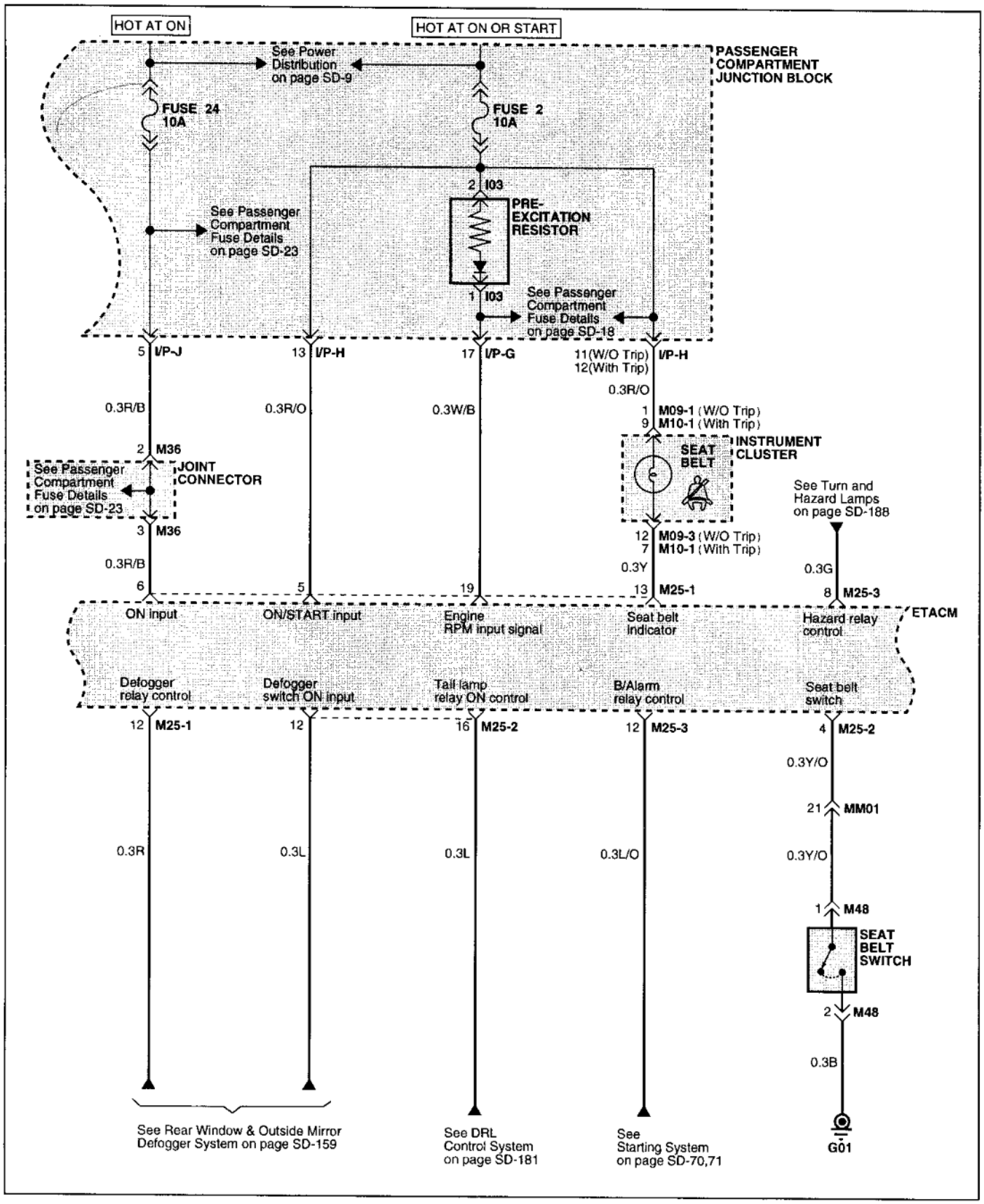
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (1)



E2KB024A

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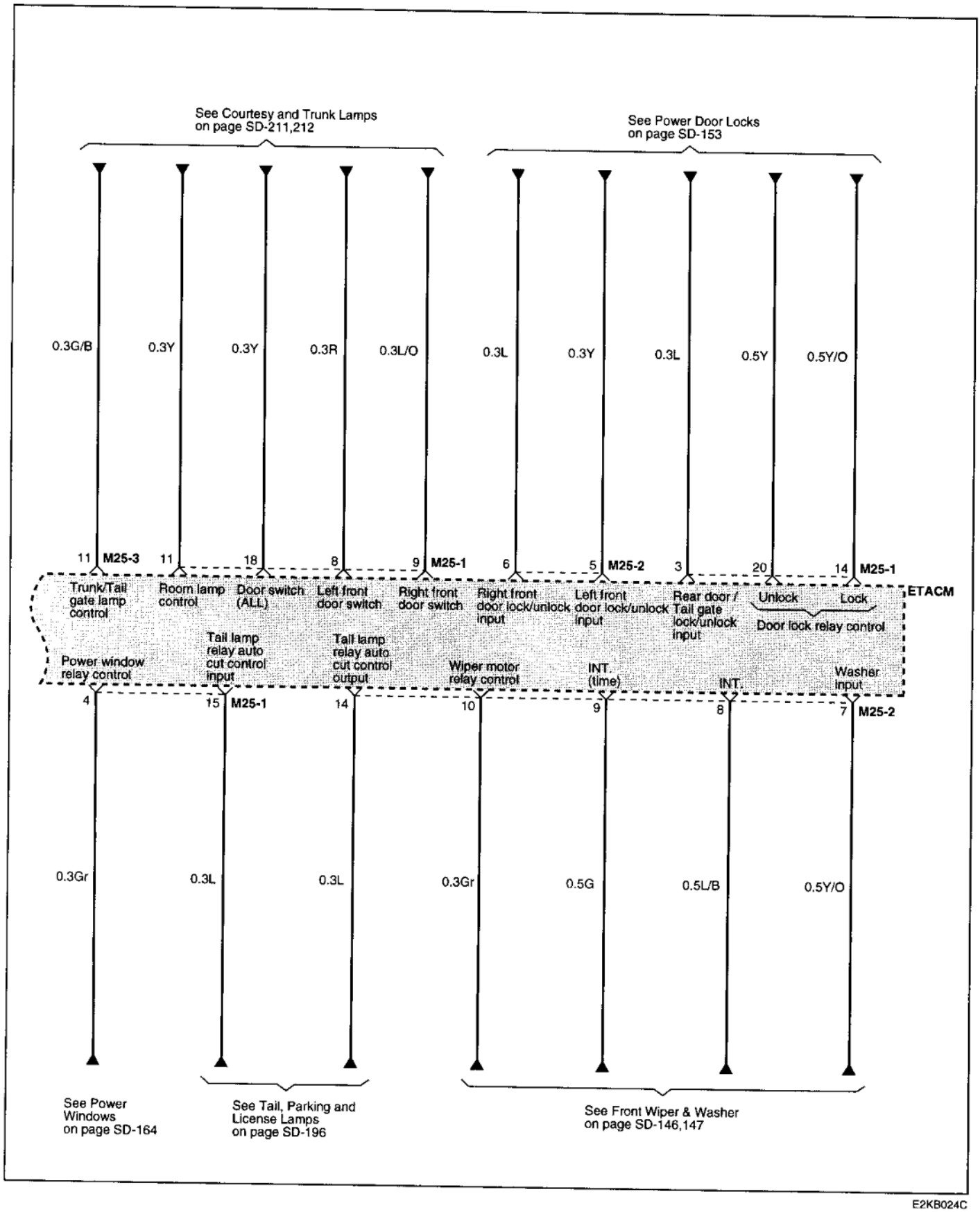
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (2)



E2KB024B

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ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (3)



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E2KB024C

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C08	Siren (1.6L)	CL-16
C58	Siren (1.8L/2.0L)	CL-19
E38	Hood switch	CL-12
I03	Pre-Excitation resistor	CL-14
M05	Ignition key ILL. and door warning switch	CL-2
M06	Multipurpose check connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M25–3	ETACM	CL-3
M30	Chime bell	CL-4
M33	Joint connector	CL-4
M36	Joint connector	CL-4
R03	Trunk unlock switch	CL-24
Connectors		
I/P-G		CL-9
I/P-H		CL-9
I/P-J		CL-9
MC02		CL-8
MC05		CL-8
MM01		CL-9
Grounds		
G01		CL-25
G05		CL-25
G11		CL-25
G12		CL-26

Circuit Description

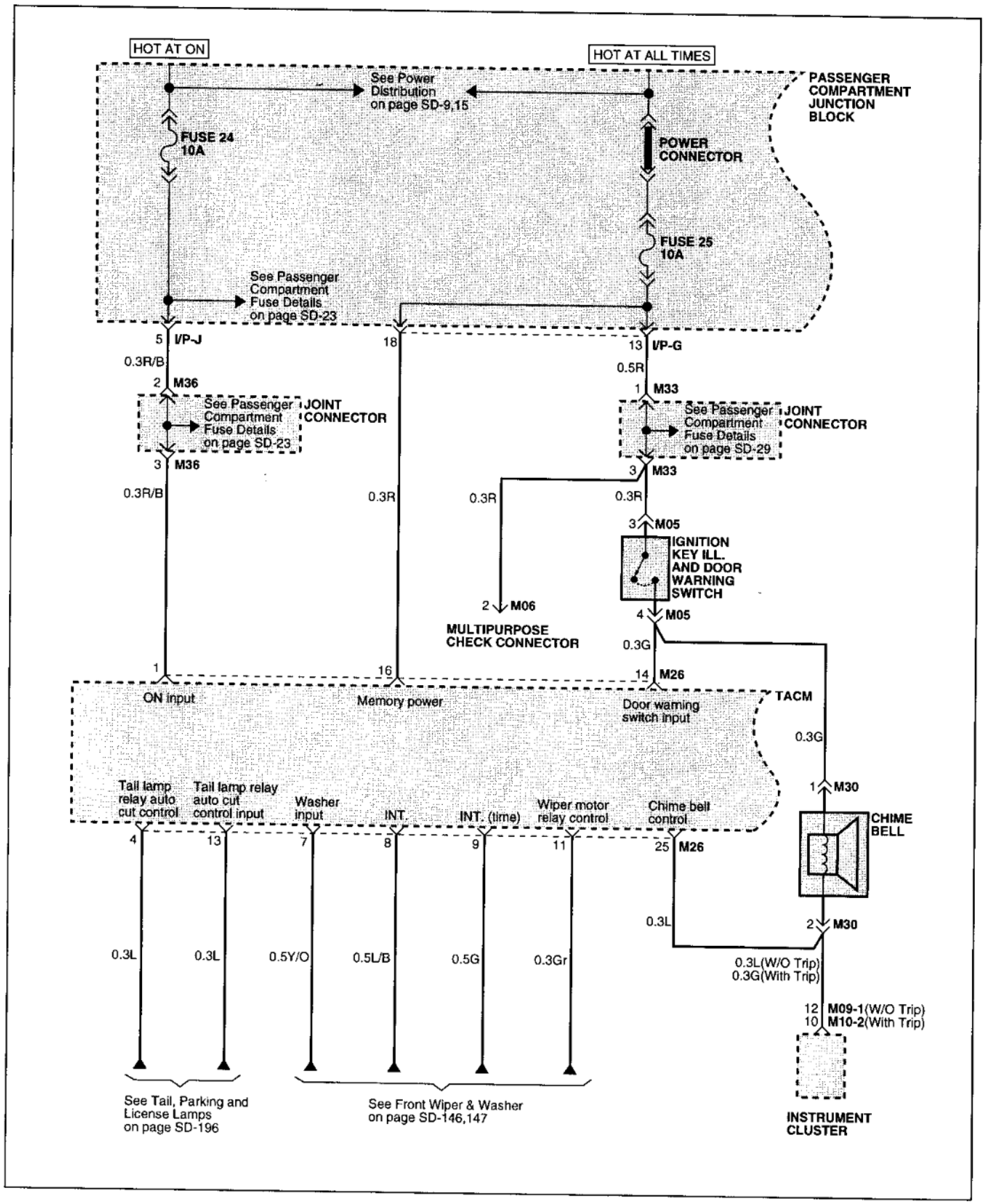
The Electronic Time and Alarm Control Module (ETACM) controls the front wiper & washer, siren, power door lock, courtesy and trunk lamps, rear window defogger & outside mirror defogger, B/Alarm, delay out room lamp, door warning, seat belt warning, ignition key hole illumination, door key hole illumination, and so on.

The module receives battery voltage at all times from fuse 25. Fuse 24, fuse 2 supplies battery voltage to the module with the ignition switch in ON, ON or START. For details on the use of the various inputs and outputs, see the system indicated in the schematic diagram.

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TACS (TIME & ALARM CONTROL SYSTEM) E2KB0250

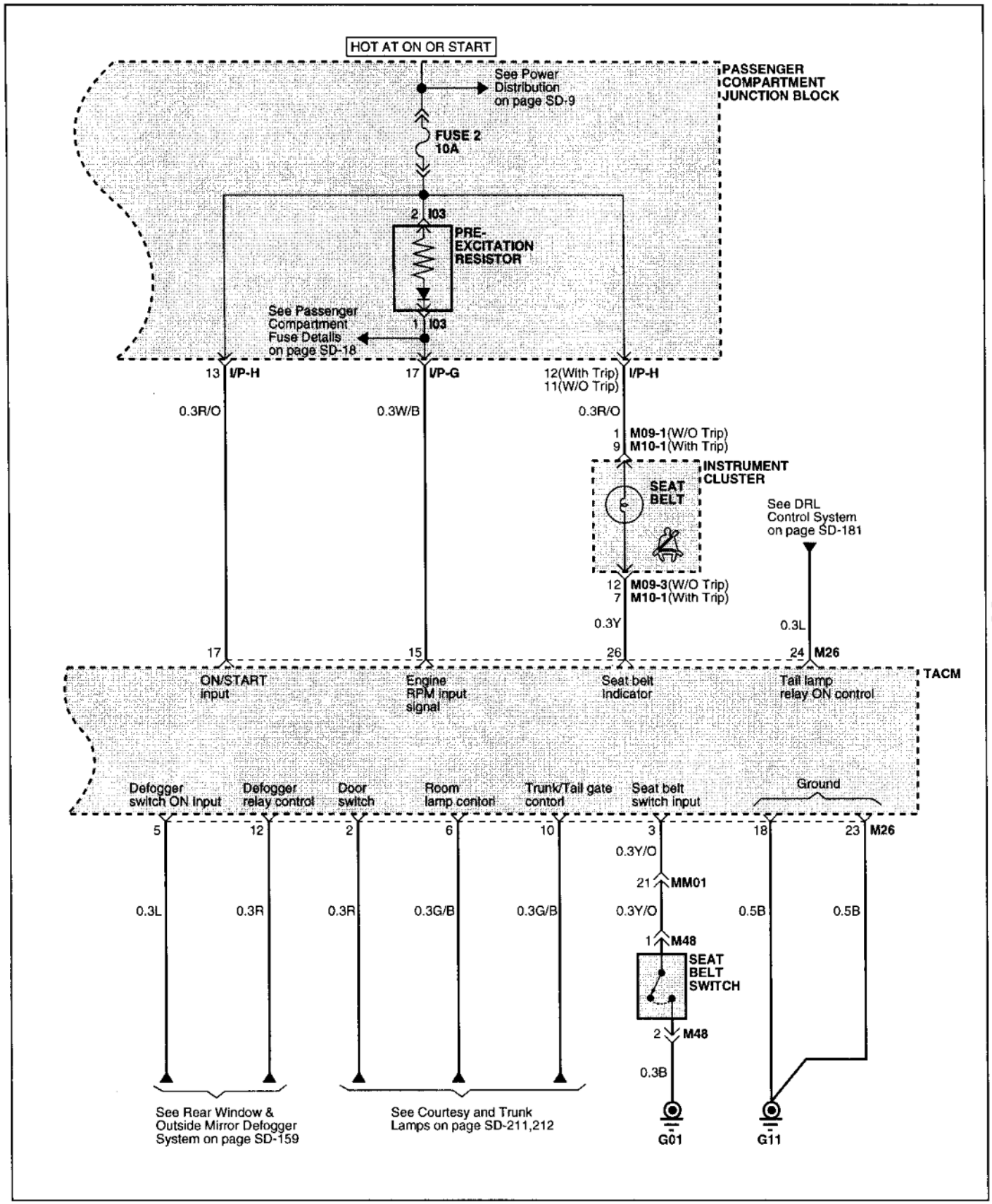
TACS (TIME & ALARM CONTROL SYSTEM) (1)



E2KB025A

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TACS (TIME & ALARM CONTROL SYSTEM) (2)



E2KB025B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
I03	Pre-Excitation resistor	CL-14
M05	Ignition key ILL. and door warning switch	CL-2
M06	Multipurpose check connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M30	Chime bell	CL-4
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M48	Seat belt switch	CL-5
Connectors		
I/P-G		CL-9
I/P-H		CL-9
I/P-J		CL-9
MM01		CL-9
Grounds		
G01		CL-25
G11		CL-25

Circuit Description

The Time and Alarm Control Module (TACM) controls the front wiper & washer, tail, park & license lamps, courtesy and trunk lamps, rear window defogger & out side mirror defogger, door warning and seat belt warning.
The module receives battery voltage at all times from fuse 25.

Fuse 24 and fuse 2 supplies battery voltage to the module with the ignition switch in ON, ON or START.
For details on the use of the various inputs and outputs, see the system indicated in the schematic diagram.

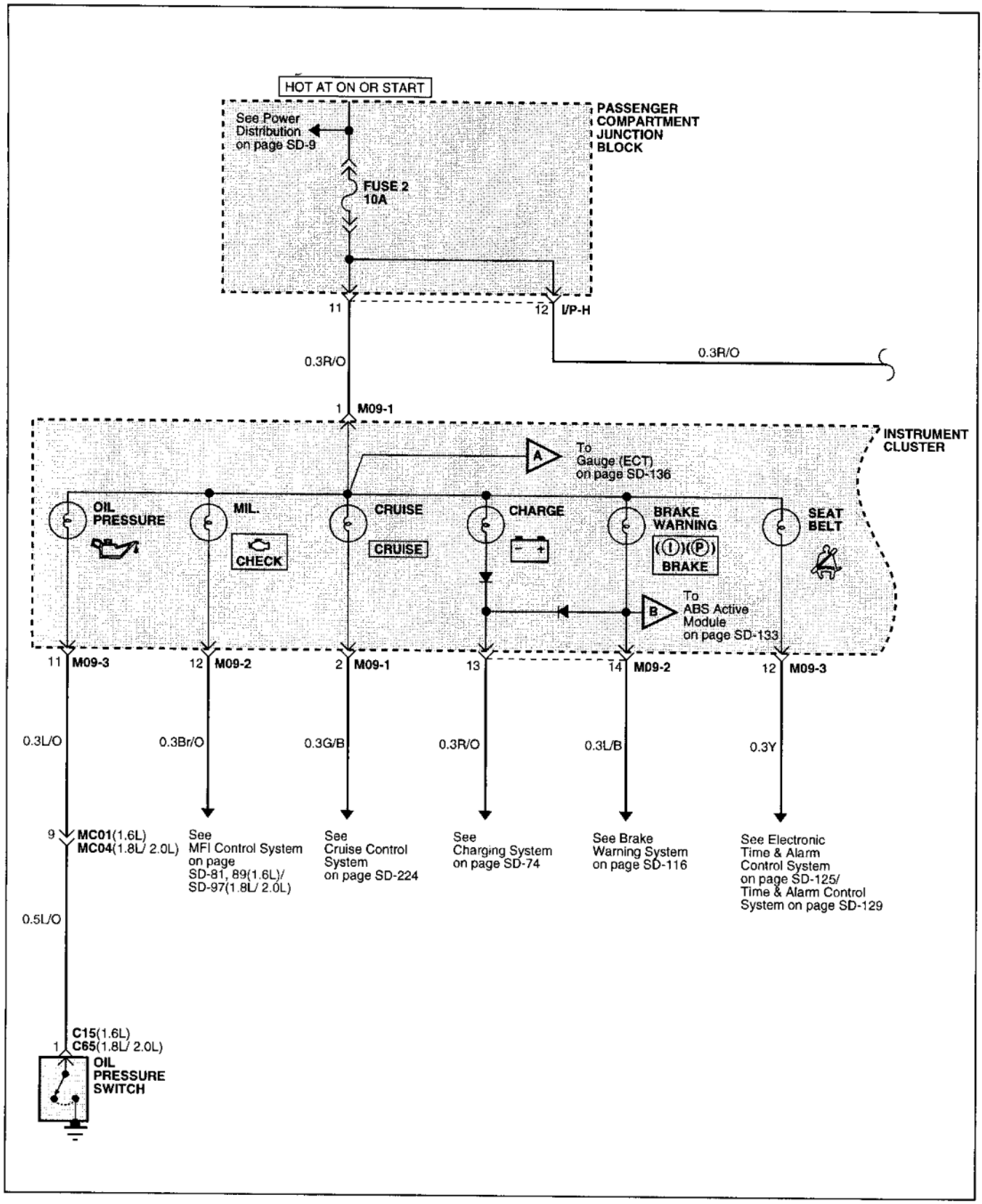
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INDICATORS AND GAUGES (WITHOUT TRIP) E2KB0260

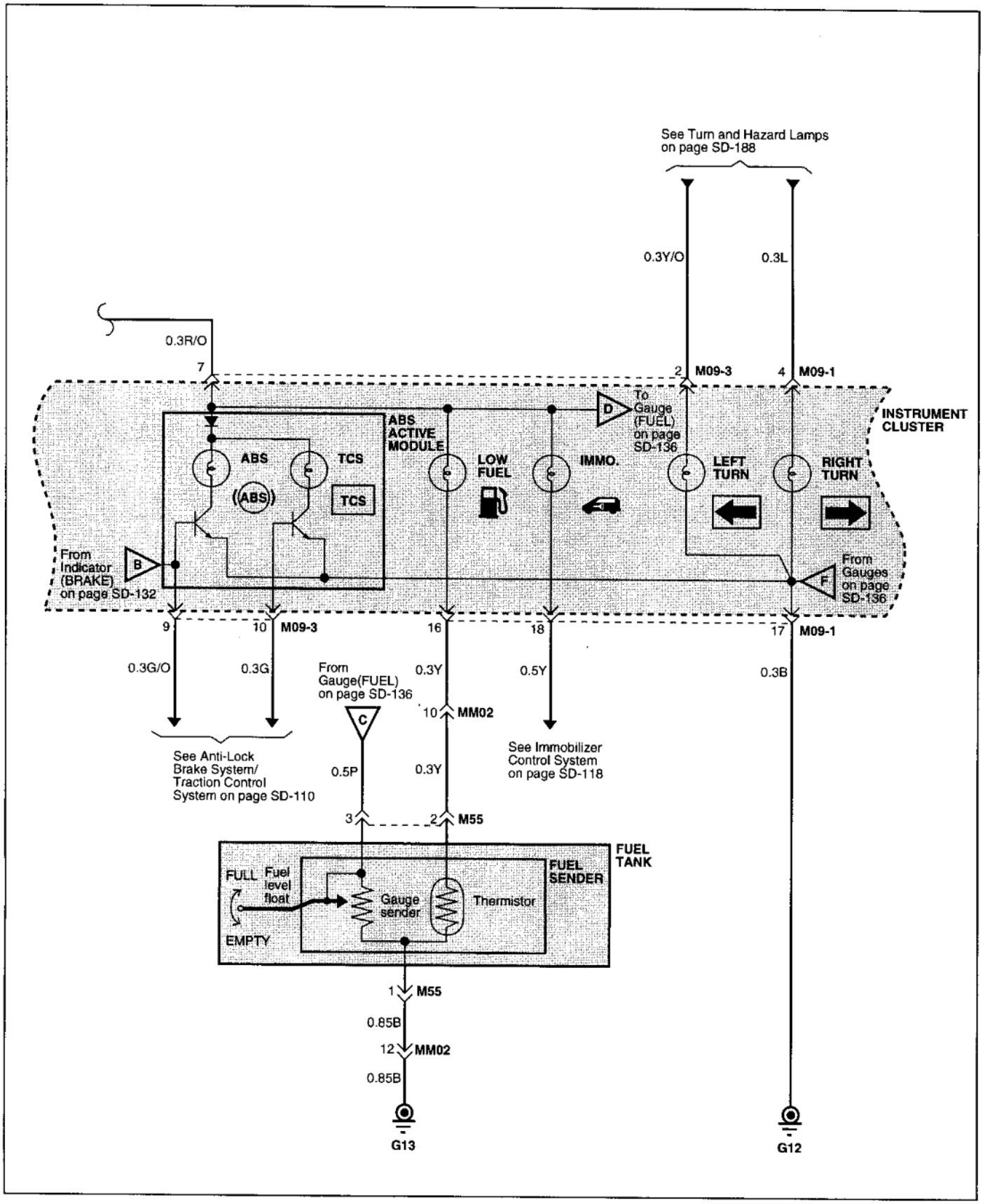
INDICATORS AND GAUGES (WITHOUT TRIP) (1)



E2KB026A

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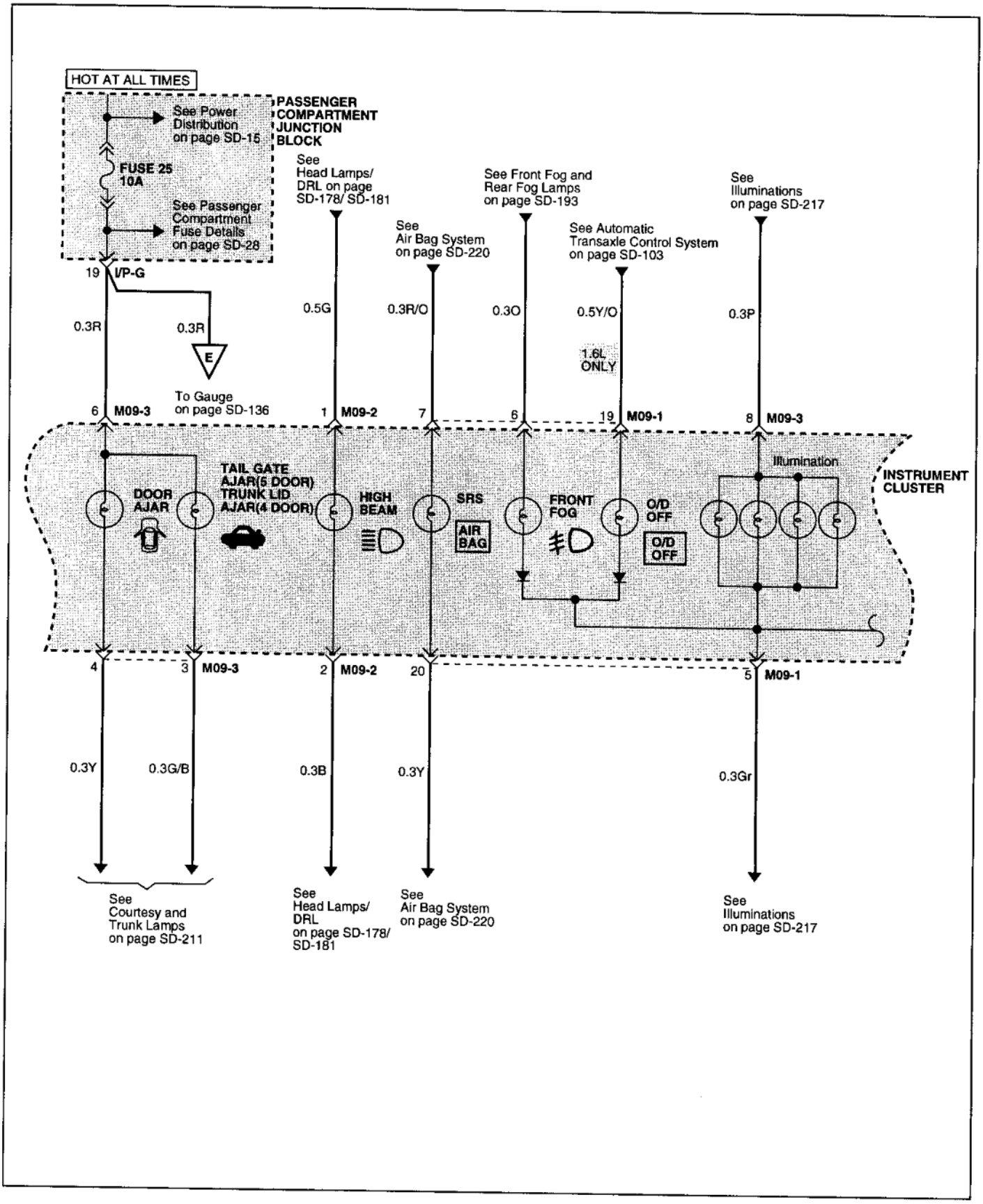
INDICATORS AND GAUGES (WITHOUT TRIP) (2)



E2KB026B

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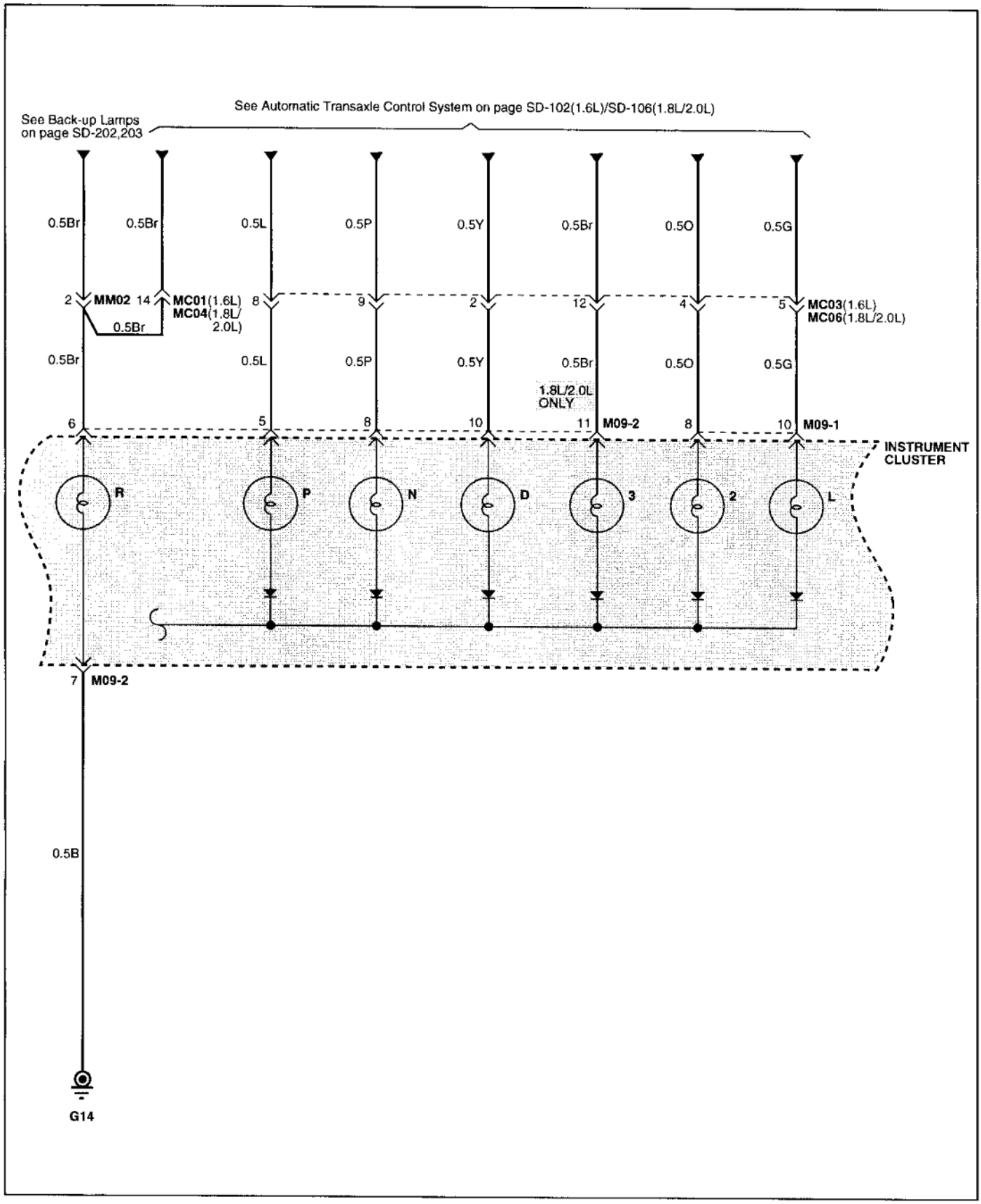
INDICATORS AND GAUGES (WITHOUT TRIP) (3)



E2KB026C

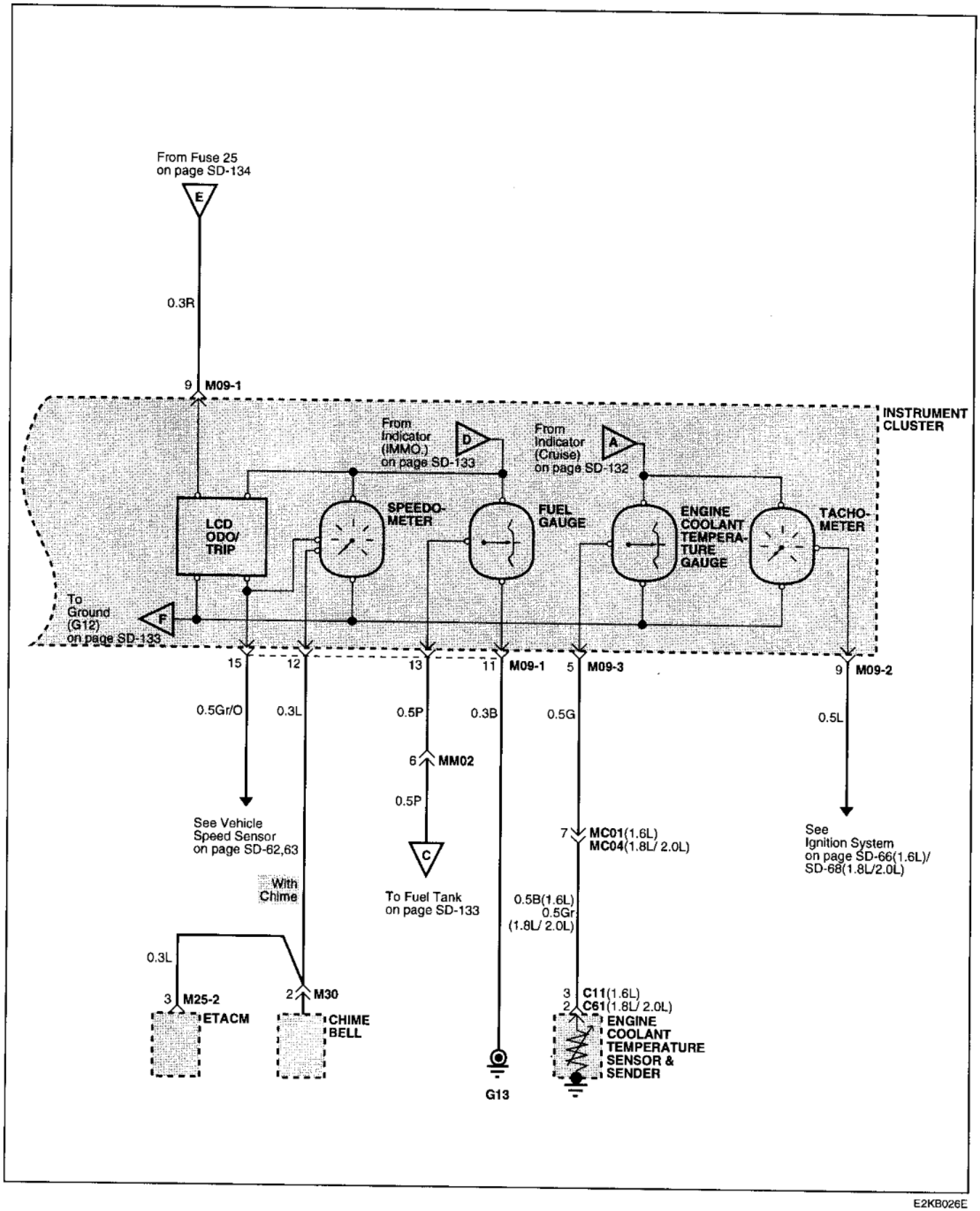
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INDICATORS AND GAUGES (WITHOUT TRIP) (4)



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INDICATORS AND GAUGES (WITHOUT TRIP) (5)



E2KB026E

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C11	Engine coolant temperature sensor & sender (1.6L)	CL-16
C15	Oil pressure switch (1.6L)	CL-17
C61	Engine coolant temperature sensor & sender (1.8L/2.0L)	CL-19
C65	Oil pressure switch (1.8L/2.0)	CL-20
M09–1	Instrument cluster	CL-2
M09–2	Instrument cluster	CL-2
M09–3	Instrument cluster	CL-2
M25–2	ETACM	CL-3
M30	Chime bell	CL-4
M55	Fuel sender & Fuel pump motor	CL-5
Connectors		
I/P-G		CL-9
I/P-H		CL-9
MC01		CL-8
MC03		CL-8
MC04		CL-8
MC06		CL-8
MM02		CL-9
Grounds		
G12		CL-26
G13		CL-26
G14		CL-26

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Circuit Description

GAUGES Operation
With the ignition switch in ON or START, battery voltage is applied to the gauges (Speedometer, Tachometer, Fuel Gauge and Engine Coolant Temperature Gauge) from fues 2.

Speedometer
The speedometer drive circuits receive pulses from the Vehicle Speed Sensor (VSS). The pulse rates increase as the car accelerates. The frequency and duration of these input pulses are measured and displayed by the speedometer.

Tachometer
The tachometer displays engine speed in rpm. Voltage pulses are taken from the ignition system and sent to the tachometer. The tachometer responds to the frequency of the voltage pulses which vary according to engine speed. The ECM processes these pulses into a signal that causes the gauge needle to move.

Fuel Gauge
The pointer of the fuel gauge is moved by the magnetic field of two coils. The coils are at right angles to each other. The megnetic field, controlled by the fuel gauge sender, causes the gauge needle to move. As the resistance in the sender varies, current through the gauge coils changes. When the fuel level is below the thermistor, the resistance of thermistor varies, providing a ground for the low fuel indicator bulb.

Engine Coolant Temperature Gauge
The pointer of the engine coolant temperature gauge is moved by the magnetic field of two coils. The coils are at right angles to each other. The magnetic field, controlled by the engine coolant temperature sender, cause the gauge needle to move. As the resistance in the sender varies, current through the gauge coils changes.

INDICATOR Operation
With the ignition switch in ON or START, battery voltage is applied to the indicator bulb from fues 2.

Oil pressure indicator
When the oil pressure is low (oil pressure switch is closed), ground is provided to the oil pressure indicator bulb. The oil pressure does not register when the engine is not running or with ignition ON. In that, case the pressure switch remains closed and the indicator illuminates.

Low fuel indicator
The thermister in the fuel gauge sender is near the bottom of the tank. When the fuel level is below the thermister, the resistance of the thermistor lowers, providing a ground for the indicator.

Check ENGINE indicator
The ground of the indicator is controlled by the ECM. The control module will light the indicator when the engine is not running or when it detects engine problems.

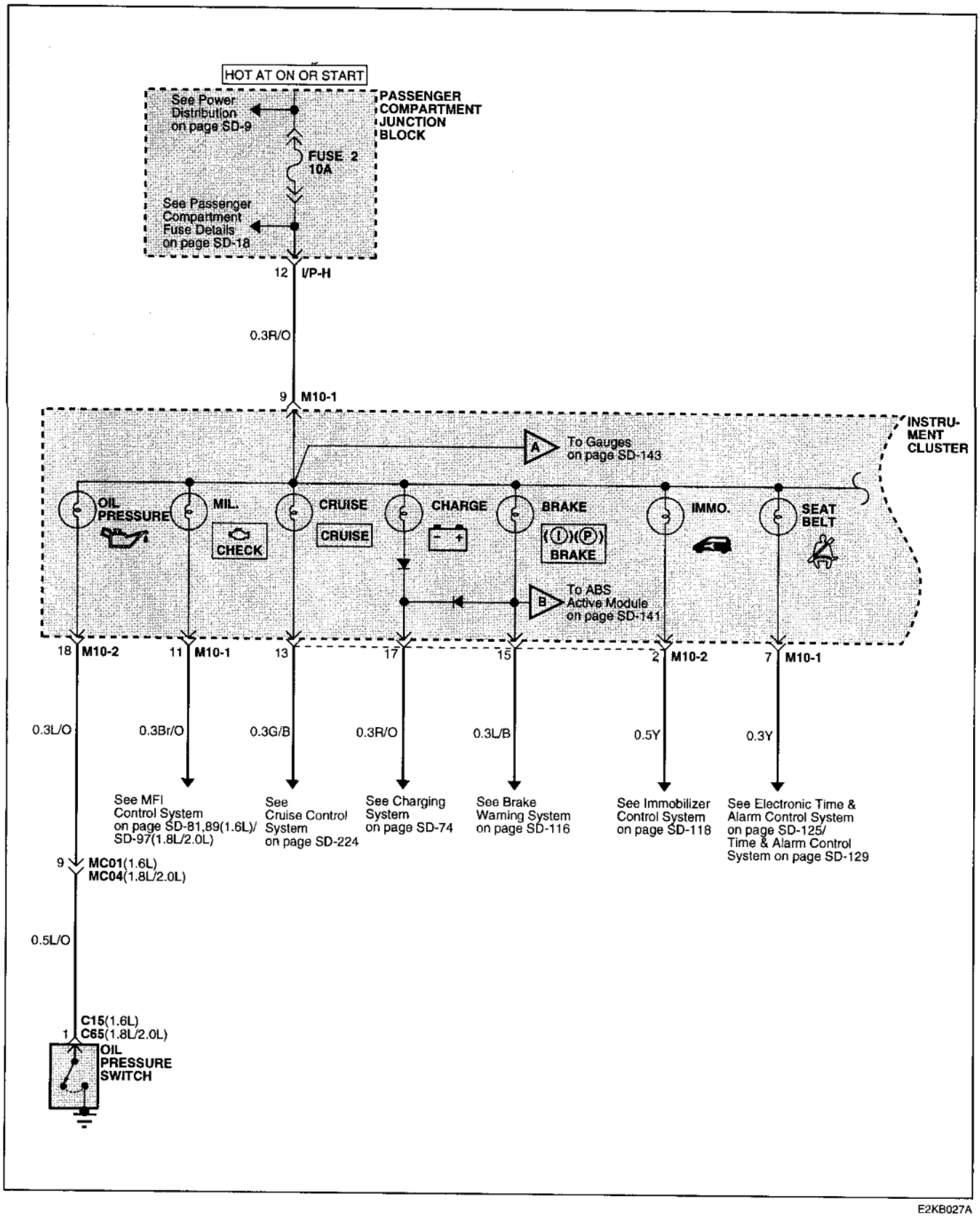
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INDICATORS AND GAUGES (WITH TRIP) E2KB0270

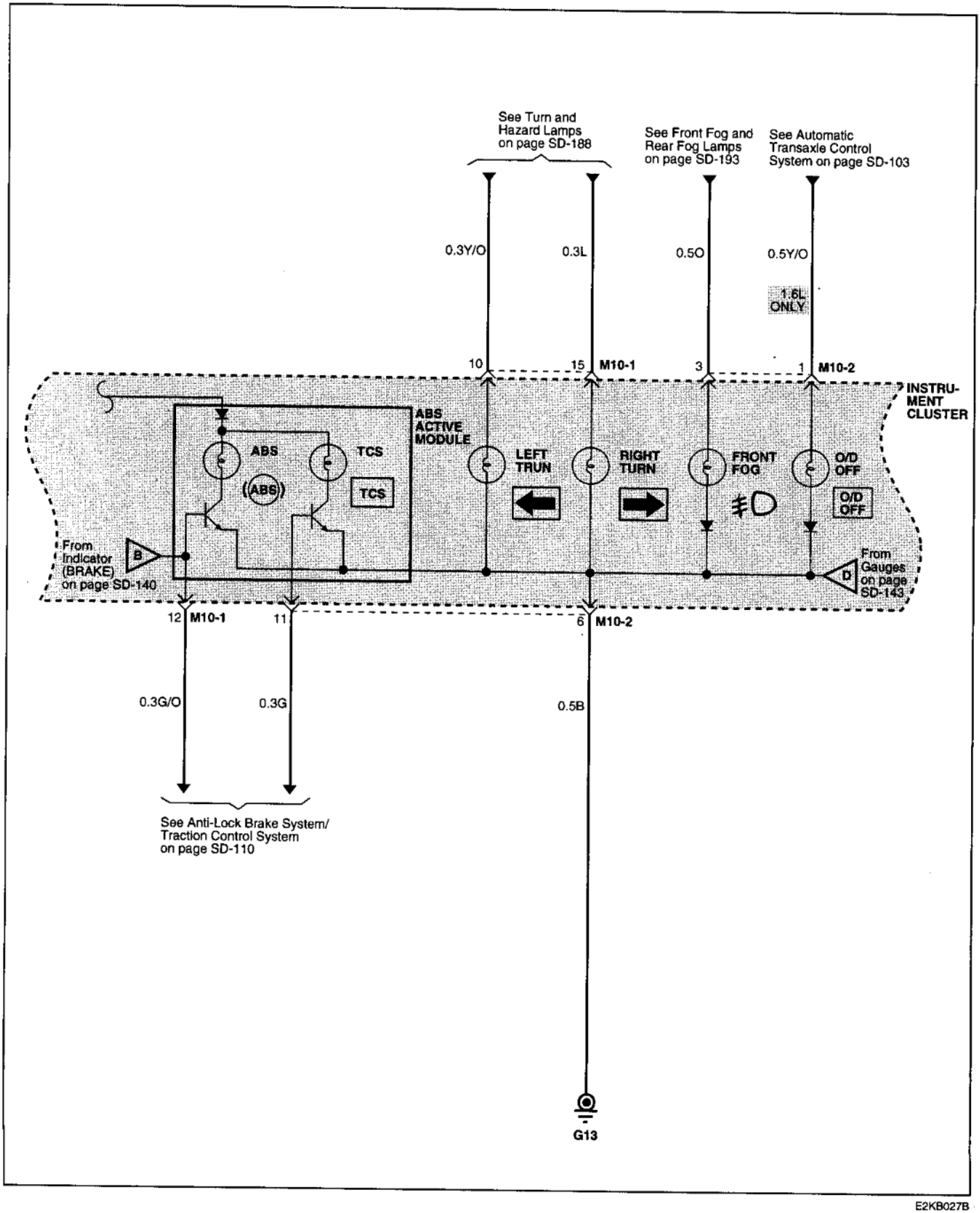
INDICATORS AND GAUGES (WITH TRIP) (1)



E2KB027A

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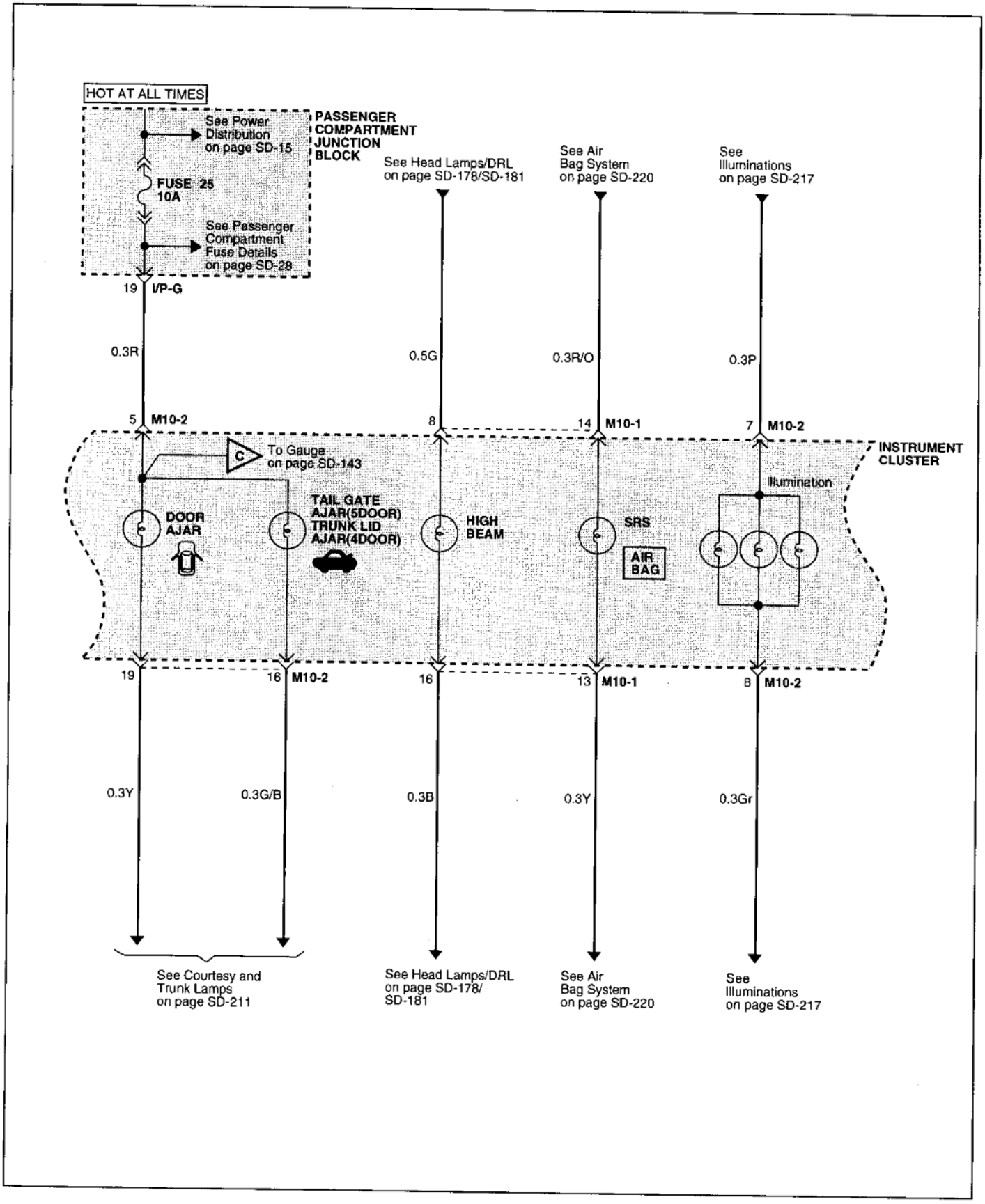
INDICATORS AND GAUGES (WITH TRIP) (2)



E2KB027B

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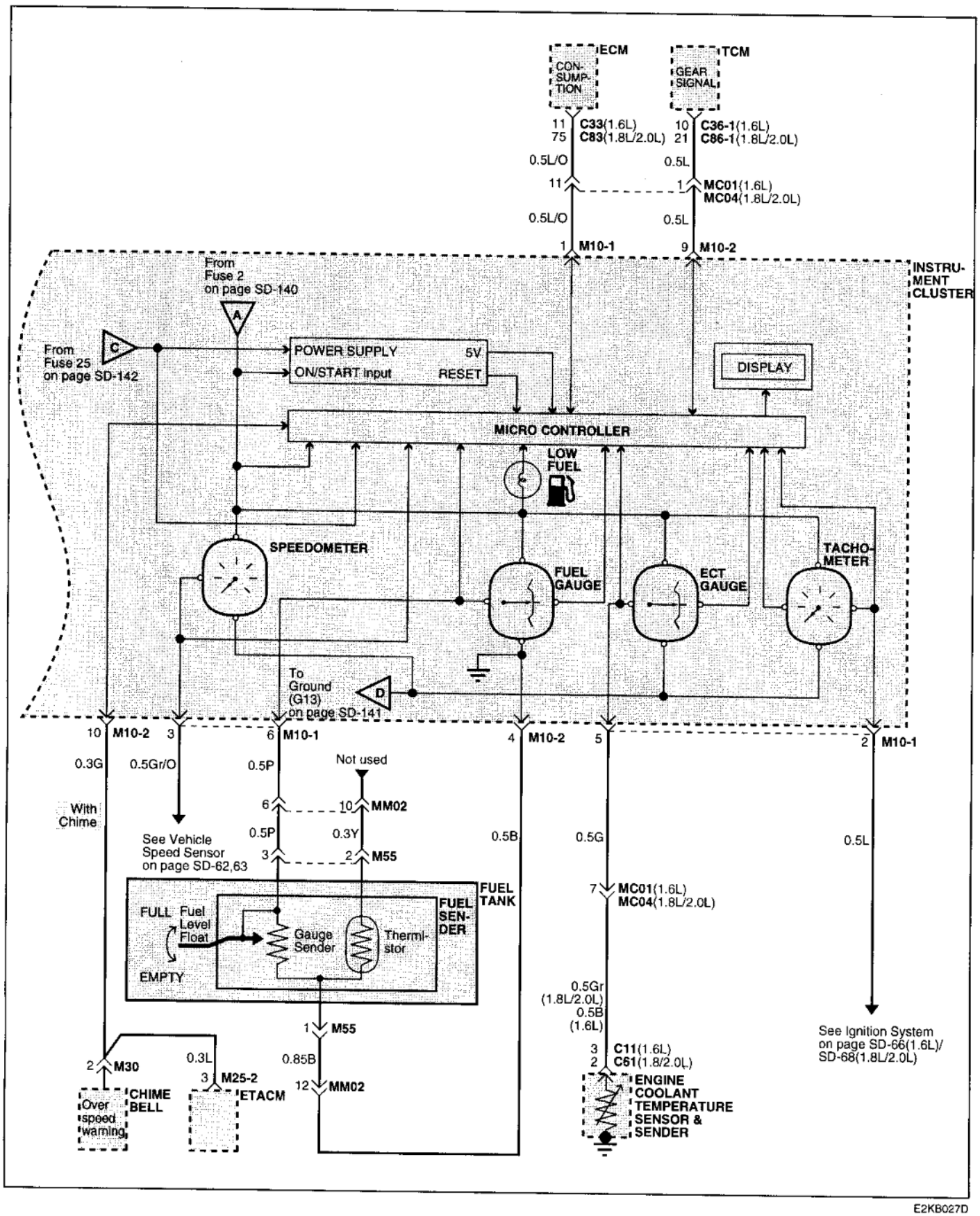
INDICATORS AND GAUGES (WITH TRIP) (3)



E2KB027C

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INDICATORS AND GAUGES (WITH TRIP) (4)



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E2KB027D

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C11	Engine coolant temperature sensor & sender (1.6L)	CL-16
C15	Oil pressure switch (1.6L)	CL-17
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C61	Engine coolant temperature sensor & sender (1.8L/2.0L)	CL-19
C65	Oil pressure switch (1.8L/2.0)	CL-20
C83	ECM (1.8L/2.0L)	CL-21
C86–1	TCM (1.8L/2.0L)	CL-21
E18	Ambient sensor	CL-11
M10–1	Instrument cluster	CL-3
M10–2	Instrument cluster	CL-3
M25–2	ETACM	CL-3
M30	Chime bell	CL-4
Connectors		
I/P-G		CL-9
I/P-H		CL-9
MC01		CL-8
MC04		CL-8
MM02		CL-9
Ground		
G13		CL-26

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Circuit Description

GAUGES Operation
With the ignition switch in ON or START, battery voltage is applied to the gauges (Speedometer, Tachometer, Fuel Gauge and Engine Coolant Temperature Gauge) from fues 2.

Speedometer
The speedometer drive circuits receive pulses from the Vehicle Speed Sensor (VSS). The pulse rates increase as the car accelerates. The frequency and duration of these input pulses are measured and displayed by the speedometer.

Tachometer
The tachometer displays engine speed in rpm. Voltage pulses are taken from the ignition system and sent to the tachometer. The tachometer responds to the frequency of the voltage pulses which vary according to engine speed. The ECM processes these pulses into a signal that causes the gauge needle to move.

Fuel Gauge
The pointer of the fuel gauge is moved by the magnetic field of two coils. The coils are at right angles to each other. The megnetic field, controlled by the fuel gauge sender, causes the gauge needle to move. As the resistance in the sender varies, current through the gauge coils changes. When the fuel level is below the thermistor, the resistance of thermistor varies, providing a ground for the low fuel indicator bulb.

Engine Coolant Temperature Gauge
The pointer of the engine coolant temperature gauge is moved by the magnetic field of two coils. The coils are at right angles to each other. The magnetic field, controlled by the engine coolant temperature sender, cause the gauge needle to move. As the resistance in the sender varies, current through the gauge coils changes.

Trip system
The Trip computer in the instrument cluster displays all kinds of information related to driving, such as, average speed, drive time, driveable distance, on the LCD display. The trip computer receives input signals through the ECM, the TCM, the fuel sender and so on. According to the input signals, the trip computer sends output signals (trip information) to the LCD display.

INDICATOR Operation
With the ignition switch in ON or START, battery voltage is applied to the indicator bulb from fues 2.

Oil pressure indicator
When the oil pressure is low (oil pressure switch is closed), ground is provided to the oil pressure indicator bulb. The oil pressure does not register when the engine is not running or with ignition ON. In that case, the pressure switch remains closed and the indicator illuminates.

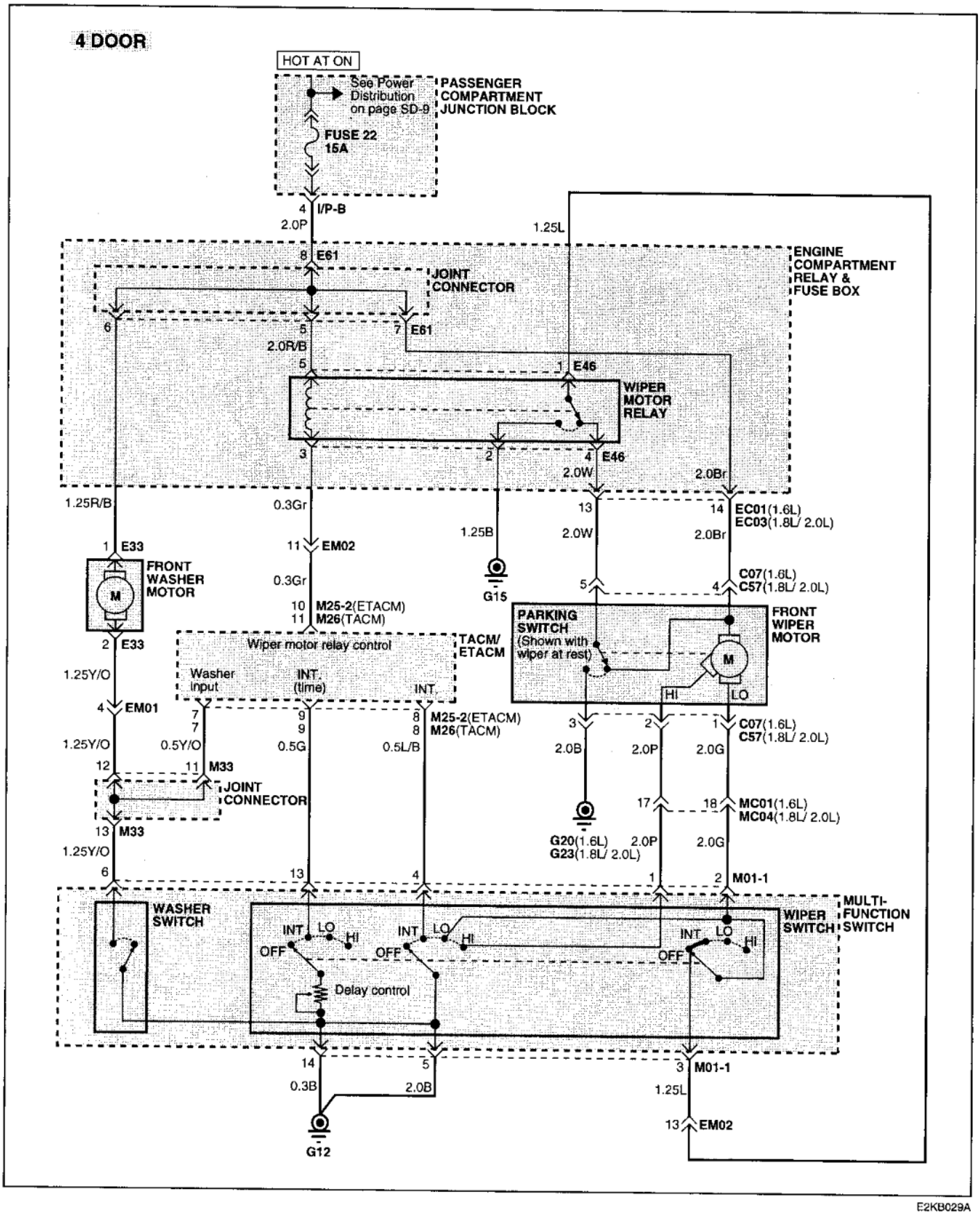
Low fuel indicator
The thermister in the fuel gauge sender is near the bottom of the tank. When the fuel level is below the thermister, the resistance of the thermistor lowers, providing a ground for the indicator.

Check ENGINE indicator
The ground of the indicator is controlled by the ECM. The control module will light the indicator when the engine is not running or when it detects engine problems.

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FRONT WIPER & WASHER E2KB0290

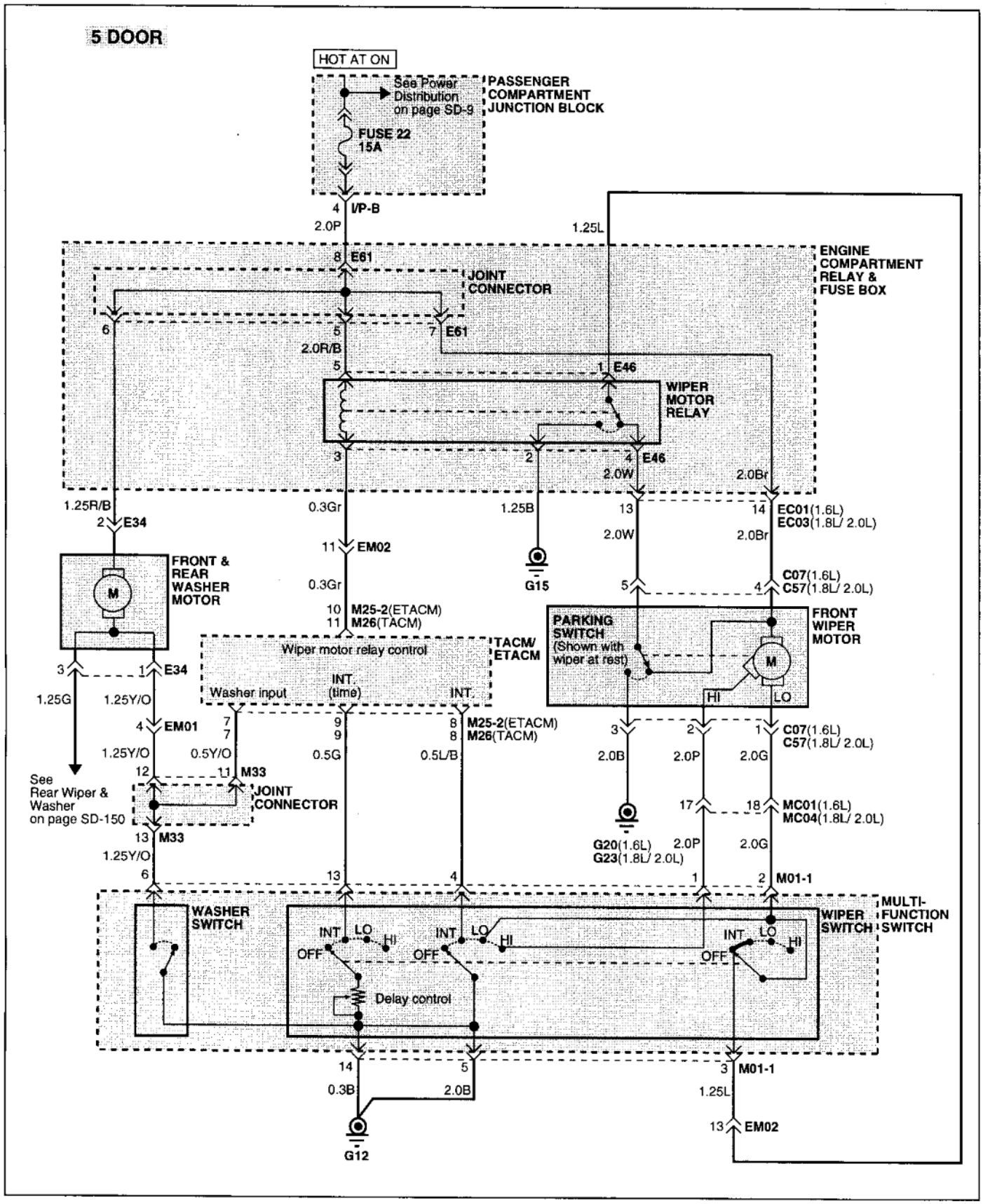
FRONT WIPER & WASHER (1)



E2KB029A

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FRONT WIPER & WASHER (2)



E2KB029B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C07	Front wiper motor (1.6L)	CL-16
C57	Front wiper motor (1.8L/2.0L)	CL-19
E33	Front washer motor (4Door)	CL-12
E34	Front & Rear washer motor (5Door)	CL-12
E46	Wiper motor relay	CL-12
E61	Joint connector	CL-12
M01–1	Multifunction switch	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M33	Joint connector	CL-4
Connectors		
EC01		CL-13
EC03		CL-13
EM01		CL-13
EM02		CL-13
I/P-B		CL-9
MC01		CL-8
MC04		CL-8
Grounds		
G12		CL-26
G15		CL-26
G20		CL-26
G23		CL-27

Circuit Description

All functions of the front wiper and washer circuit are controlled by the position of the front wiper and washer switch. The wiper switch has 4 positions : OFF, INT, LO and HI.

Wiper operation

1. Low (LO) and High (HI) position

The front wiper motor has two separate brushes for low and high speed operation. When the wiper switch is in LO or HI position, ground is applied to the appropriate brushes through the wiper switch in the multifunction switch.

2. INT position

When the wiper switch is turned to INT, the ETACM/TACM receives the INT signal and INT delay time signal. According to these signals, the control module controls the operation of the front wiper through wiper motor relay coil control. Ground is applied to the low speed brush of the front wiper motor through the closed contact of the wiper motor relay.

The remainder of the wiper's sweep is controlled by the park circuit. The cycle repeats as long as the wiper switch is in INT and the pause interval between sweeps is determined by the ETACM/TACM.

3. OFF position

When the wiper switch is turned to OFF from another position (INT, LO and HI) and the wiper is not at the rest (out of park) position, the low speed brush of the front wiper motor is grounded through the wiper switch and the auto parking switch in the front wiper motor.

Washer operation

The front wiper motor operates as long as the washer switch is pulled. When the washer switch is pulled, the control module controls the low speed operation of the front wiper motor through the wiper motor relay control.

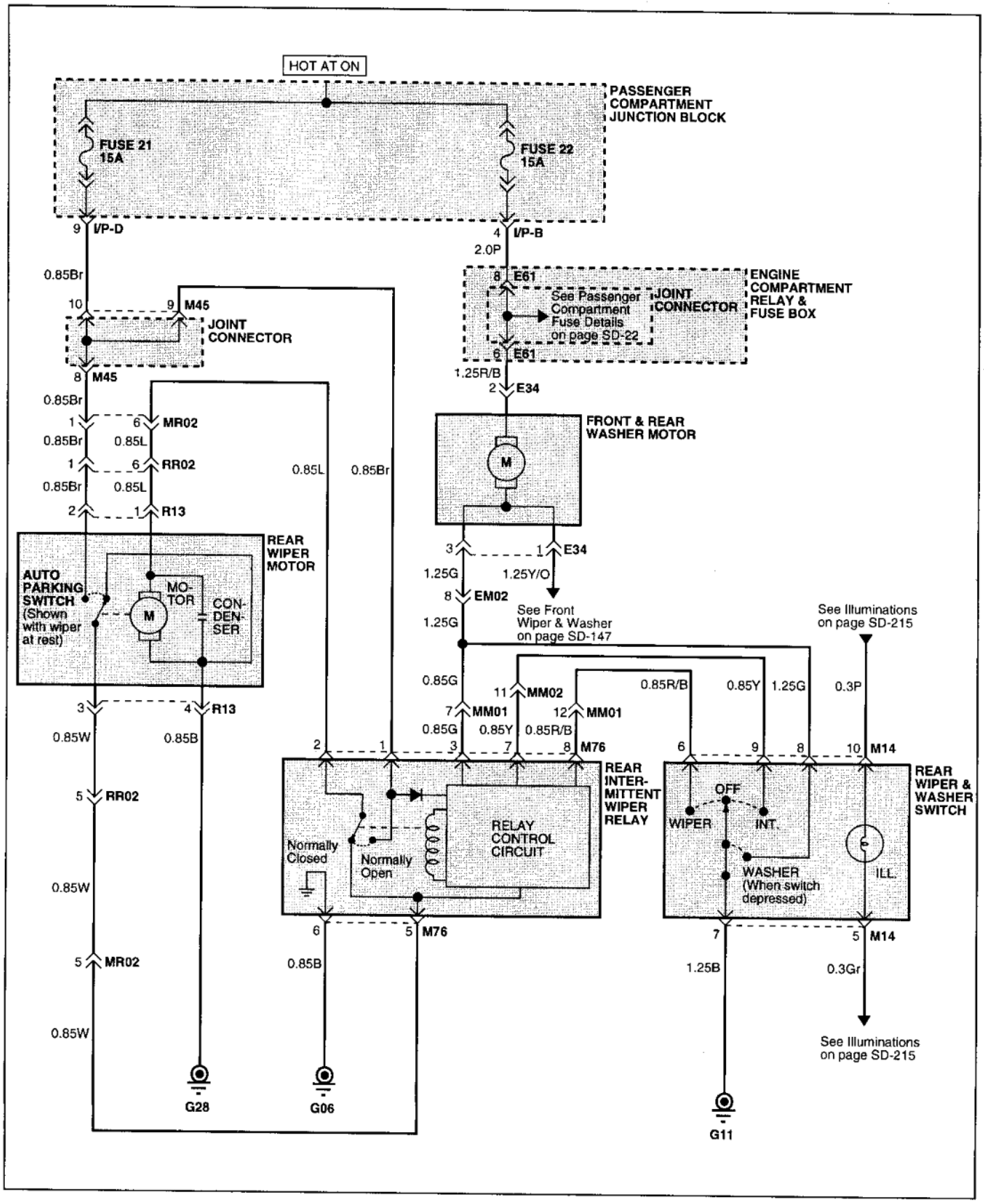
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REAR WIPER & WASHER E2KB0300

REAR WIPER & WASHER (1)



E2KB030A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E34	Front & Rear washer motor	CL-12
E61	Joint connector	CL-12
M14	Rear wiper & washer switch	CL-3
M45	Joint connector	CL-5
Connectors		
EM02		CL-13
I/P-B		CL-9
I/P-D		CL-9
MM01		CL-9
MM02		CL-9
Grounds		
G11		CL-25

Circuit Description

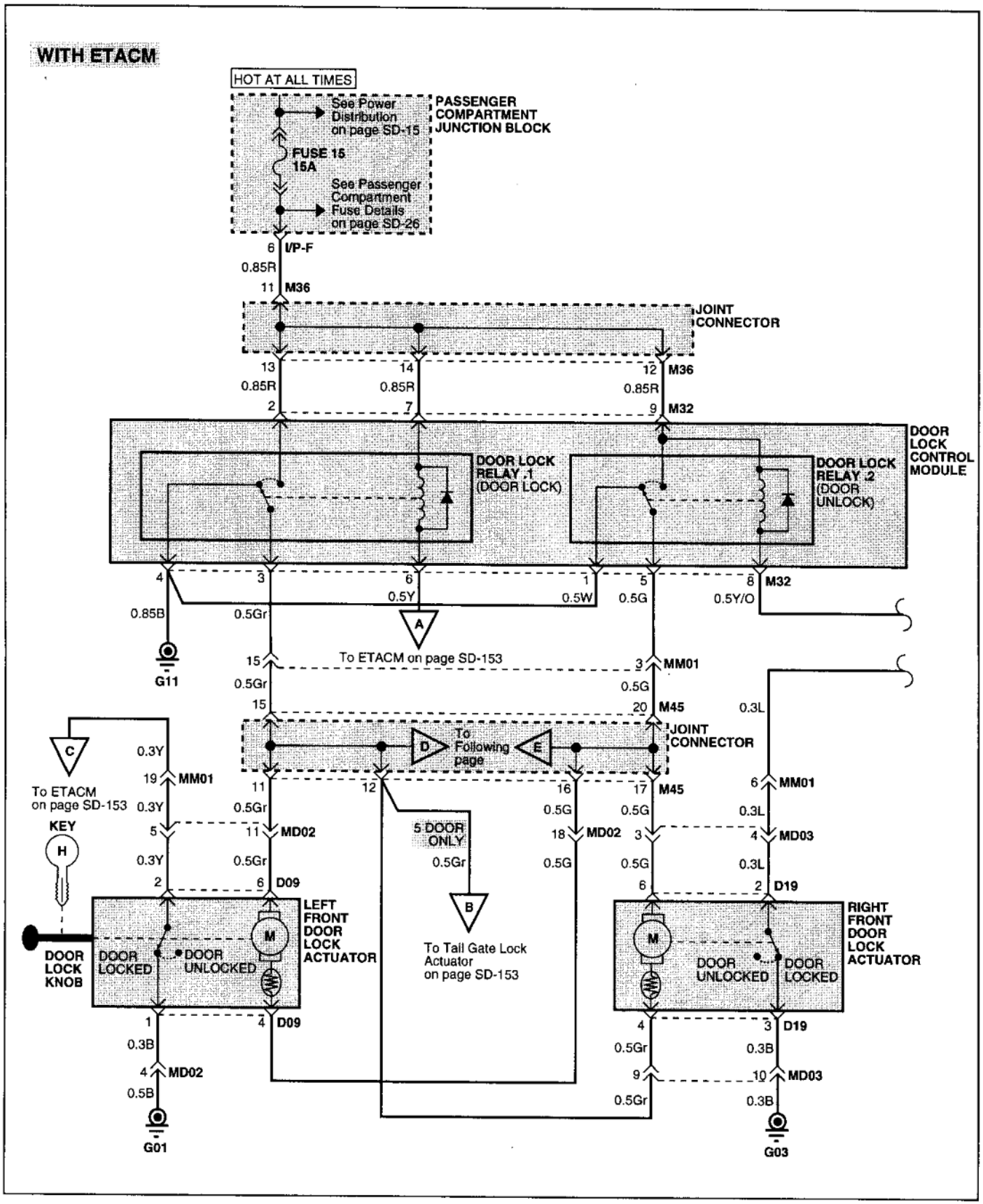
All functions of the rear wiper and washer circuits are controlled by the position of the rear wiper & washer switch. According to the switch signals, the relay control circuit,in the rear intermittent wiper relay, controls the relay operations. The rear window wiper and washer are turned ON/OFF by depressing the button. Washer fluid is sprayed on the glass as long as the button is depressed.

1. When the "ON (wiper)" position is depressed, the rear window wiper starts to operate continuously.
2. When the "INT" position is depressed, the wiper operates every five seconds intermittently.
3. When the "Washer" position is depressed, the rear window wiper wipes the window three times after the washer fluid sprays onto the rear window.

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POWER DOOR LOCKS E2KB0310

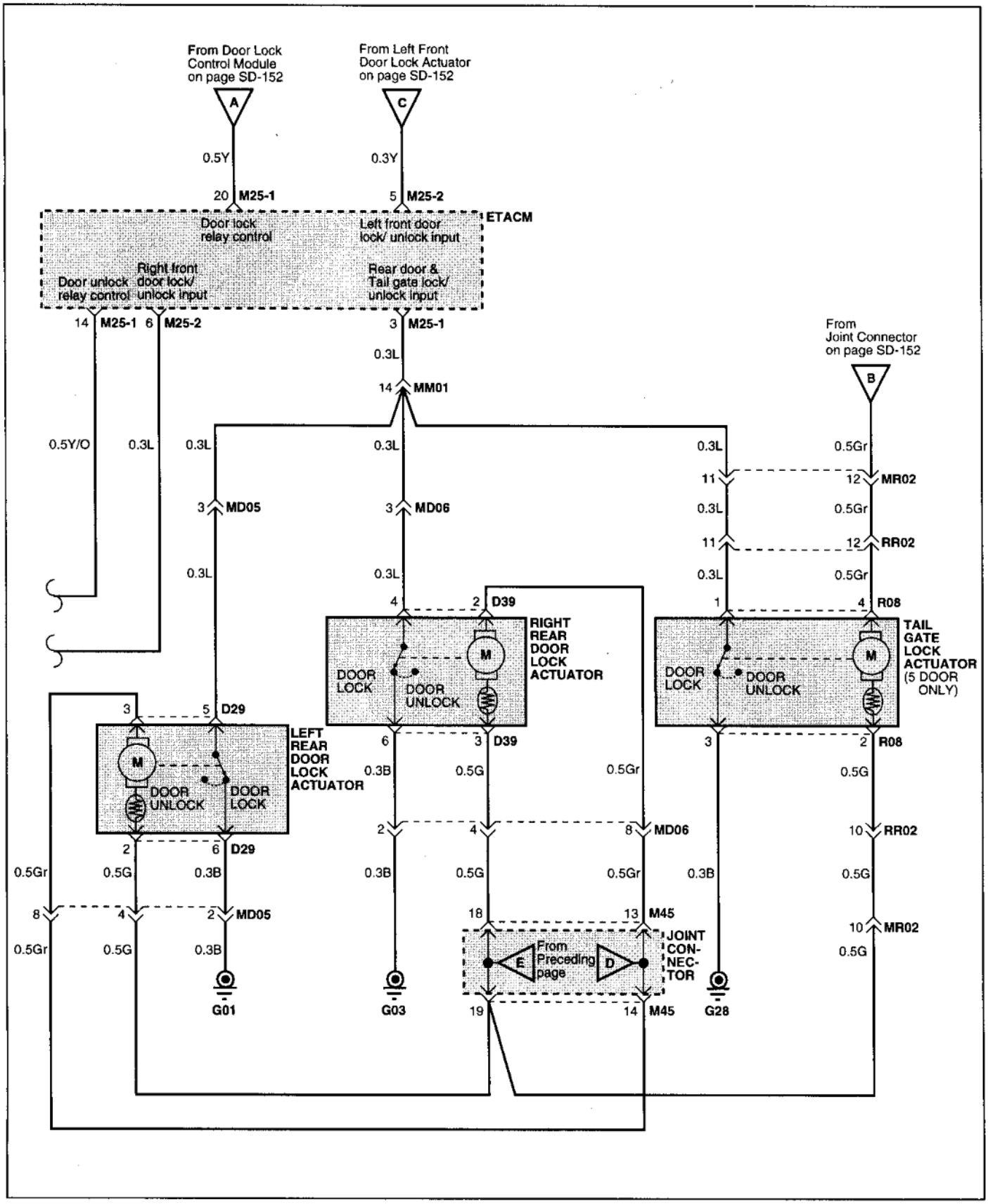
POWER DOOR LOCKS (1)



E2KB031A

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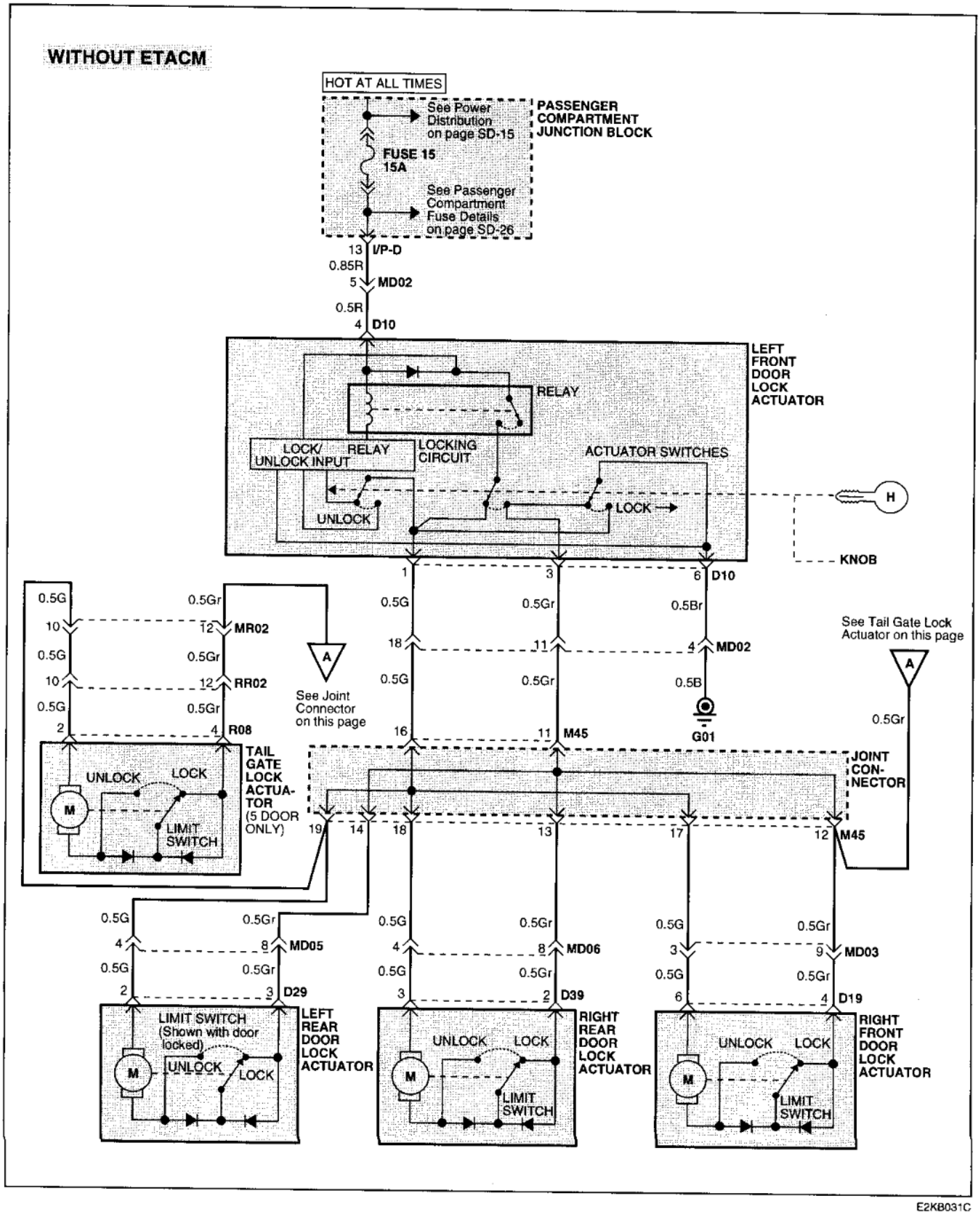
POWER DOOR LOCKS (2)



E2KB031B

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POWER DOOR LOCKS (3)



E2KB031C

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D09	Left front door lock actuator (With ETACS)	CL-23
D10	Left front door lock actuator (W/O ETACS)	CL-23
D19	Right front door lock actuator	CL-23
D29	Left rear door lock actuator	CL-23
D39	Right rear door lock actuator	CL-23
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M32	Door lock control module	CL-4
M36	Joint connector	CL-4
M45	Joint connector	CL-5
Connectors		
I/P-D		CL-9
I/P-F		CL-9
MD02		CL-8
MD03		CL-8
MD05		CL-8
MD06		CL-8
MM01		CL-9
Grounds		
G01		CL-25
G03		CL-25
G11		CL-25

Circuit Description

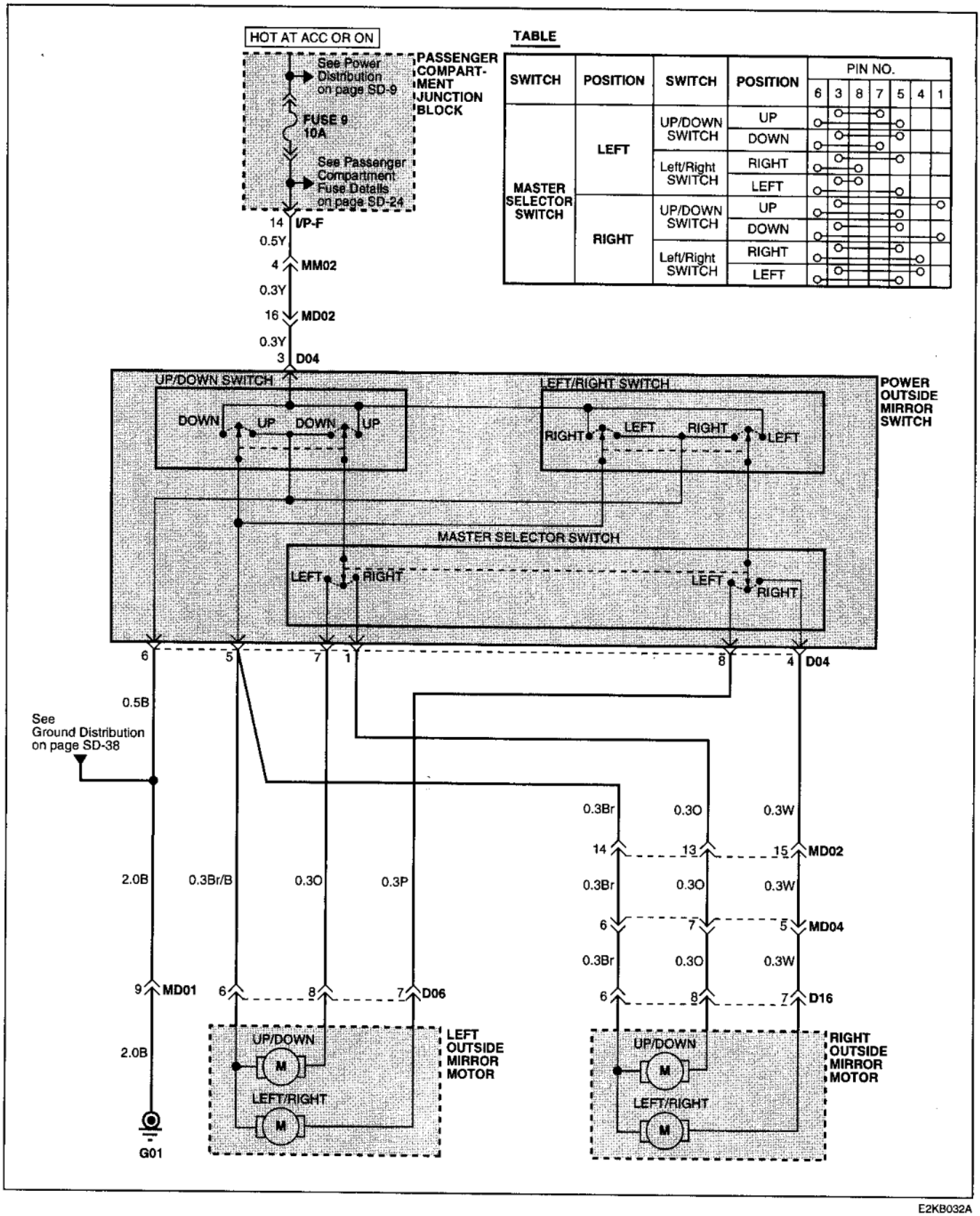
Battery voltage is supplied to both the door lock and unlock relay in the door lock control module at all times from fuse 15. There is a metal rod that links the left front door lock/unlock switch and the left front door lock actuator. When the left front door lock/unlock switch is pushed to lock, the metal rod then pushes the actuator switch in the left front door lock actuator to the lock position. The ETACM receives the lock input signal and then supplies power to the left/right rear, tail gate lock actuator (5door only) and right front door lock actuator.

Each motor is grounded through a limit switch in the appropriate door lock actuator. The ETACM will de-energize the relay coil when the limit switches in the door lock actuators move to the unlock position. The door locks work similarly when the left front door lock switch is pushed to unlock, except that the electrical current goes through each motor in the opposite direction.

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POWER OUTSIDE MIRRORS E2KB0320

POWER OUTSIDE MIRRORS (1)



E2KB032A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D04	Power outside mirror switch	CL-23
D06	Left outside mirror motor	CL-23
D16	Right outside mirror motor	CL-23
Connectors		
MD01		CL-8
MD02		CL-8
MD04		CL-8
MM02		CL-9
Ground		
G01		CL-25

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Circuit Description

The operation of the two outside mirrors is controlled by the power outside mirror switch. Each mirror has two reversible motors: One motor moves the mirror up and down, the other motor moves the mirror left and right. The master selector switch in the power outside mirror switch controls the direction of the battery voltage to the right or left outside mirror.

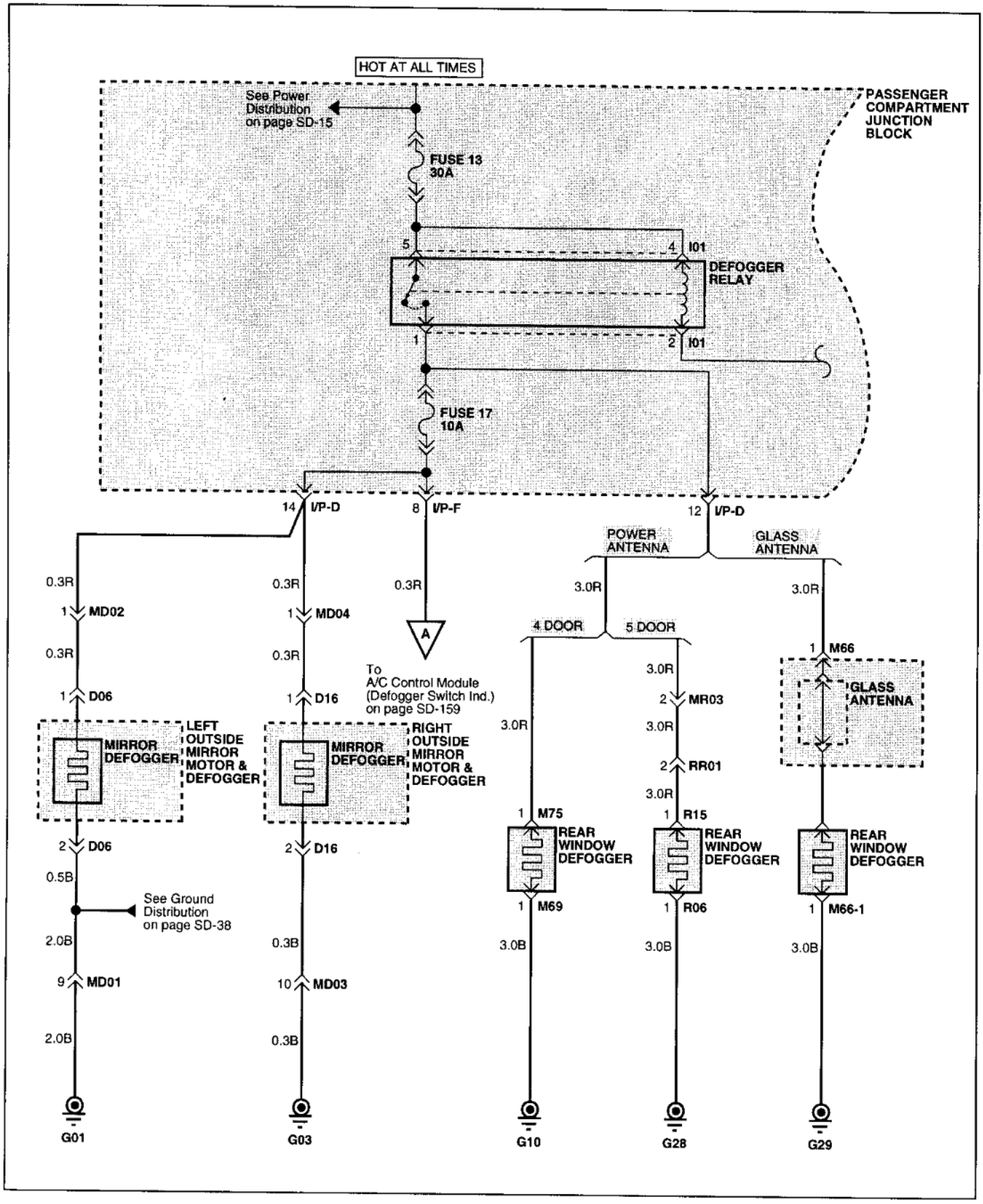
With the ignition switch in ACC or ON, battery voltage is applied from fuse 9 to the power outside mirror switch. With the master selector switch in the LEFT position and the up/down switch in UP, battery voltage is applied to the up contacts of the up/down switch and to the left power mirror up/down motor.

Ground is provided to the up contacts of the up/down switch and the left power mirror up/down motor and the mirror goes up. In the DOWN position, battery voltage and ground are applied to the opposite terminals of the motor.

The left/right switch works similarly to the up/down switch. With the master selector switch in the RIGHT position, battery voltage and ground are applied to the right power mirror motors, which then operate in a similar way.

REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM E2KB0340

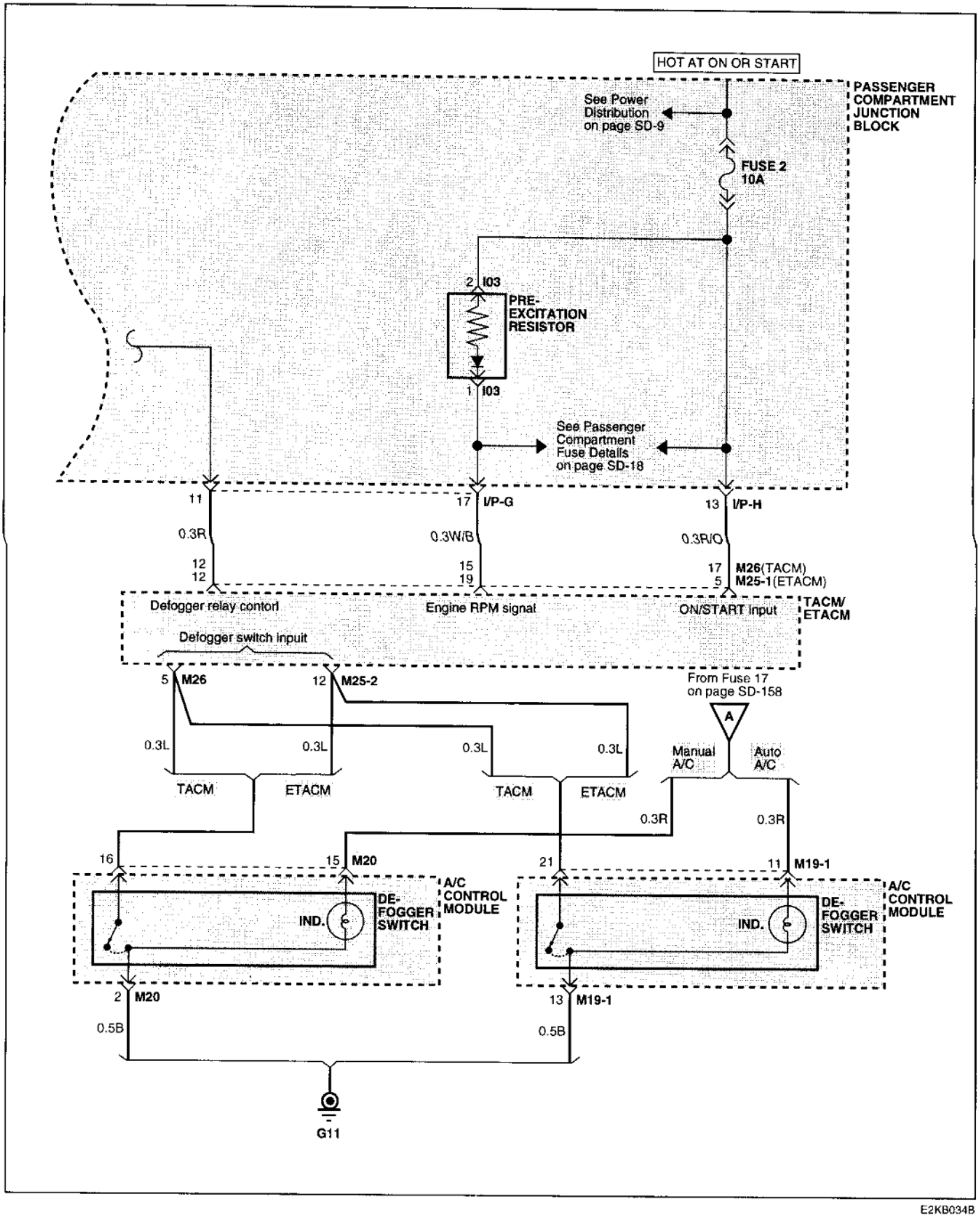
REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM (1)



E2KB034A

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REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM (2)



E2KB034B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D06	Left outside mirror motor & defogger	CL-23
D16	Right outside mirror motor & defogger	CL-23
I01	Defogger relay	CL-14
I03	Pre-Excitation resistor	CL-14
M19–1	A/C control module (Auto A/C)	CL-3
M20	A/C control module (Manual A/C)	CL-3
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M66	Glass antenna	CL-6
M66–1	Rear windowe defogger (-) (Glass antenna)	CL-6
M69	Rear window defogger (-) (Power antenna, 4Door)	CL-6
M75	Rear window defogger (+) (Power antenna, 4Door)	CL-7
Connectors		
I/P-D		CL-9
I/P-F		CL-9
I/P-G		CL-9
I/P-H		CL-9
MD01		CL-8
MD02		CL-8
MD03		CL-8
MD04		CL-8
Grounds		
G01		CL-25
G03		CL-25
G10		CL-25
G11		CL-25
G29		CL-27

Circuit Description

The ETACM (Electric Time and Alarm Control Module)/ TACM controls the operation of the rear window defogger and outside mirror defogger through defogger relay coil control.

When the defogger switch, in the A/C control module, is depressed (ON), the defogger relay coil is energized through the ETACM. Battery voltage is supplied to the rear window defogger and the outside mirror defogger through the closed defogger relay contact.

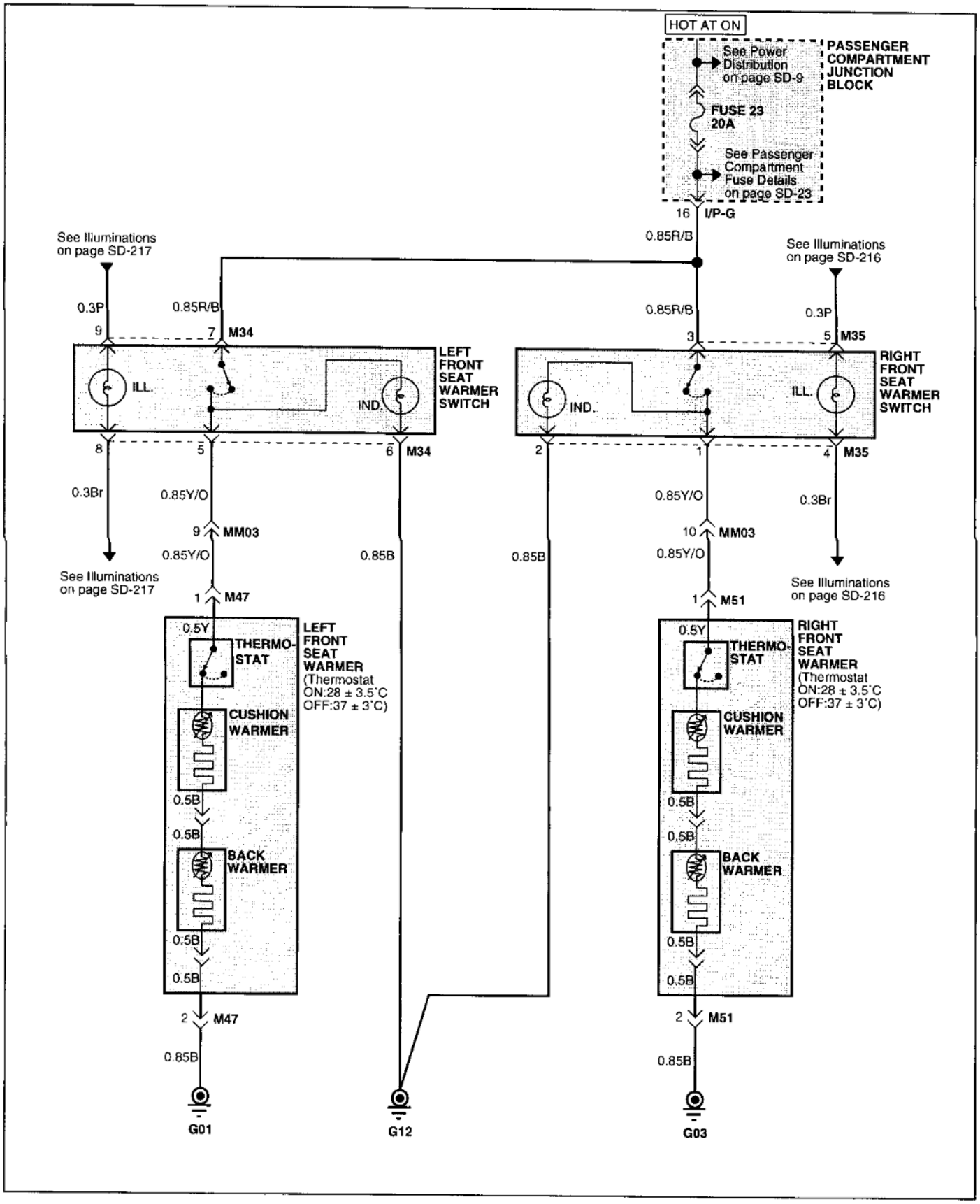
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SEAT WARMER E2KB0350

SEAT WARMER (1)



E2KB035A

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COMPONENT LOCATION INDEX (1)

Connectors	Location reference-page
I/P-G	CL-9
MM03	CL-9
Grounds	
G01	CL-25
G03	CL-25
G12	CL-26

Circuit Description

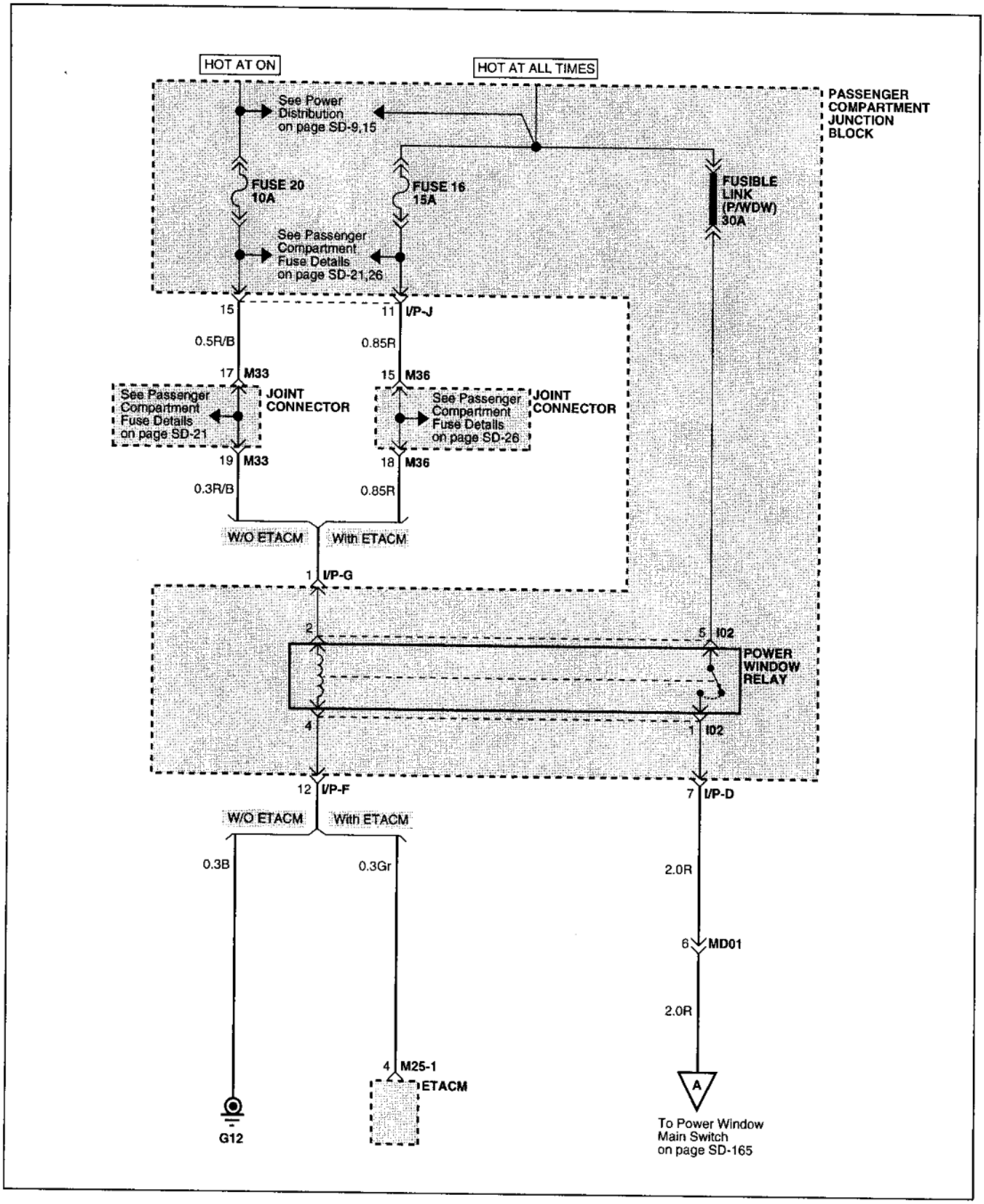
With the ignition switch in ON and the left/right front seat warmer switches are depressed, battery voltage is applied to the left/right front seat warmer through fuse 23.

When the temperature of the seat exceeds the specification, the thermostat in the seat warmers will cut the battery voltage supply (switch off) to prevent the seat warmer circuit from breaking.

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POWER WINDOWS E2KB0360

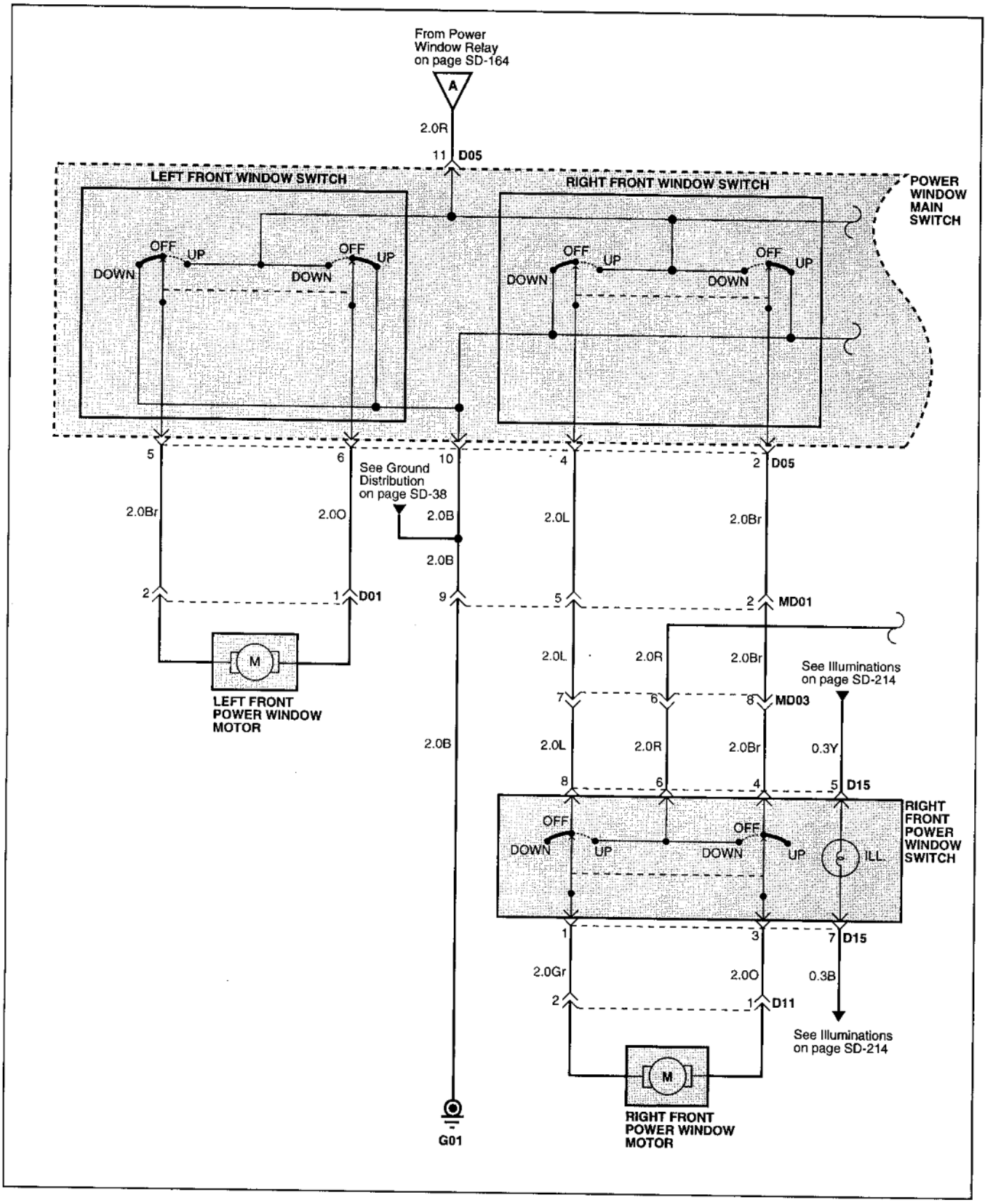
POWER WINDOWS (1)



E2KB036A

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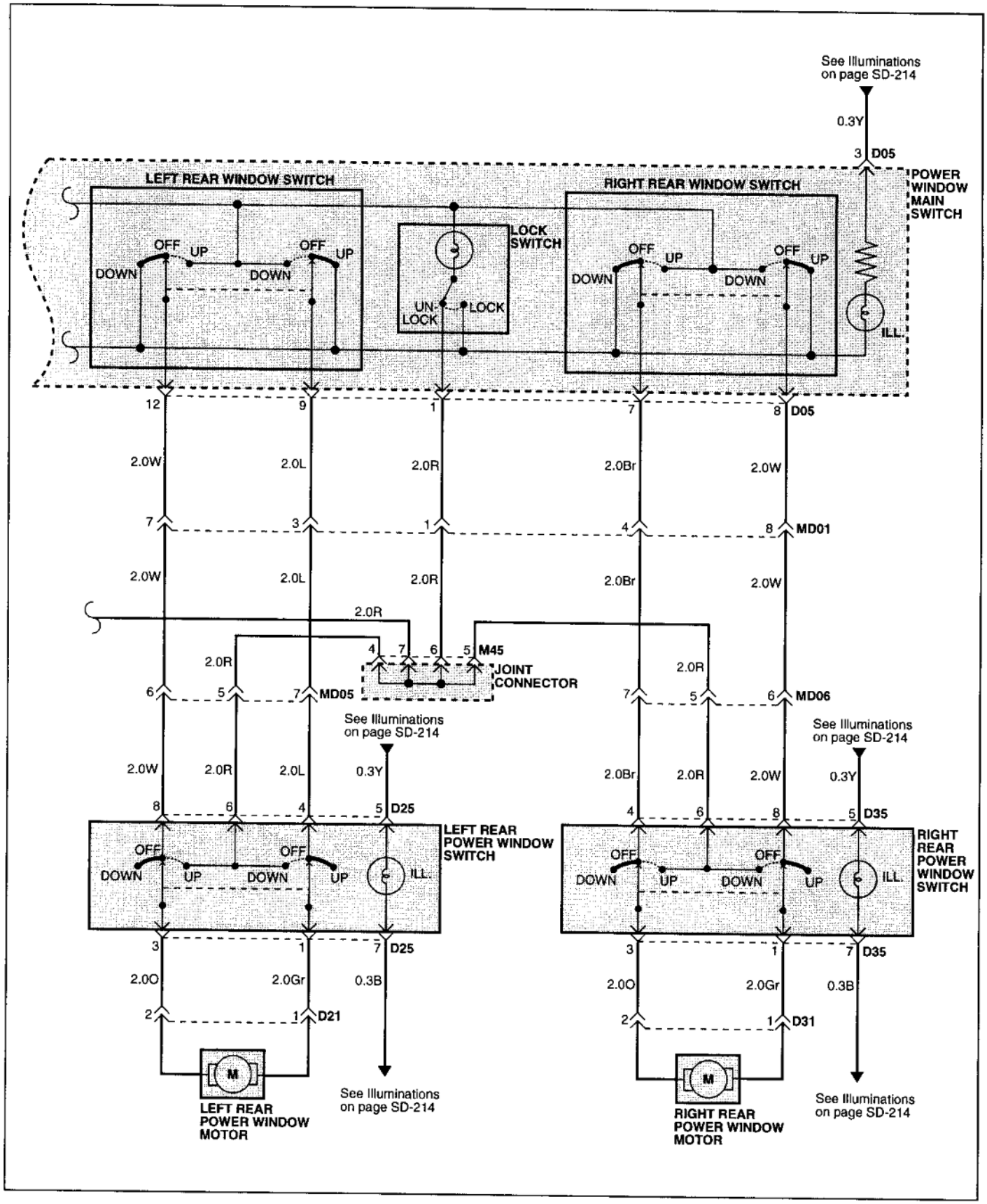
POWER WINDOWS (2)



E2KB036B

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POWER WINDOWS (3)



E2KB036C

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D01	Left front power window motor	CL-23
D05	Power window main switch	CL-23
D11	Right front power window motor	CL-23
D15	Right front power window switch	CL-23
D21	Left rear power window motor	CL-23
D25	Left rear power window switch	CL-23
D31	Right rear power window motor	CL-23
D35	Right rear power window switch	CL-23
I02	Power window relay	CL-14
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M25–1	ETACM	CL-3
M45	Joint connector	CL-5
Connectors		
I/P-D		CL-9
I/P-F		CL-9
I/P-J		CL-9
MD01		CL-8
MD03		CL-8
MD05		CL-8
MD06		CL-8
Grounds		
G01		CL-25
G12		CL-26

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Circuit Description

A permanent magnetic motor operates each of the power windows. Each motor raises or lowers the glass when voltage is supplied to it. The direction the motor turns depends on the polarity of the supply voltage.

The power window main switch controls all the power window motors. Each window switch controls only one of the power window motors. If the lock switch in the power outside mirror switch is depressed, the rear power windows and the right front power window cannot be controlled by their own window switches, however, they can still be controlled by the power window main switch.

Power Window Main Switch Operation

Battery voltage is applied at all times to both the coil and contacts of the power window relay. The coil of the relay is supplied battery voltage through fuse 20 (without ETACM)/ fuse 16 (with ETACM). Battery voltage is then supplied to the power window main switch through the closed relay contacts.

When any of the switches in the power window main switch are operated, battery voltage is applied to the power window motor. The power window motor is grounded through the opposite contact in the power window main switch. The power window motor runs to drive the window.

Window Switch Operation

When the power window relay coil is energized, battery voltage is supplied to the passenger window switches as long as the lock switch in the power window main switch is OFF (not depressed). When the passenger's window switch is operated, battery voltage is applied to one terminal of the power window motor and the other terminal is grounded through the opposite contact in the window switch and the main switch. The power window motor runs to drive the window.

SUNROOF E2KB0380

SUNROOF (1)

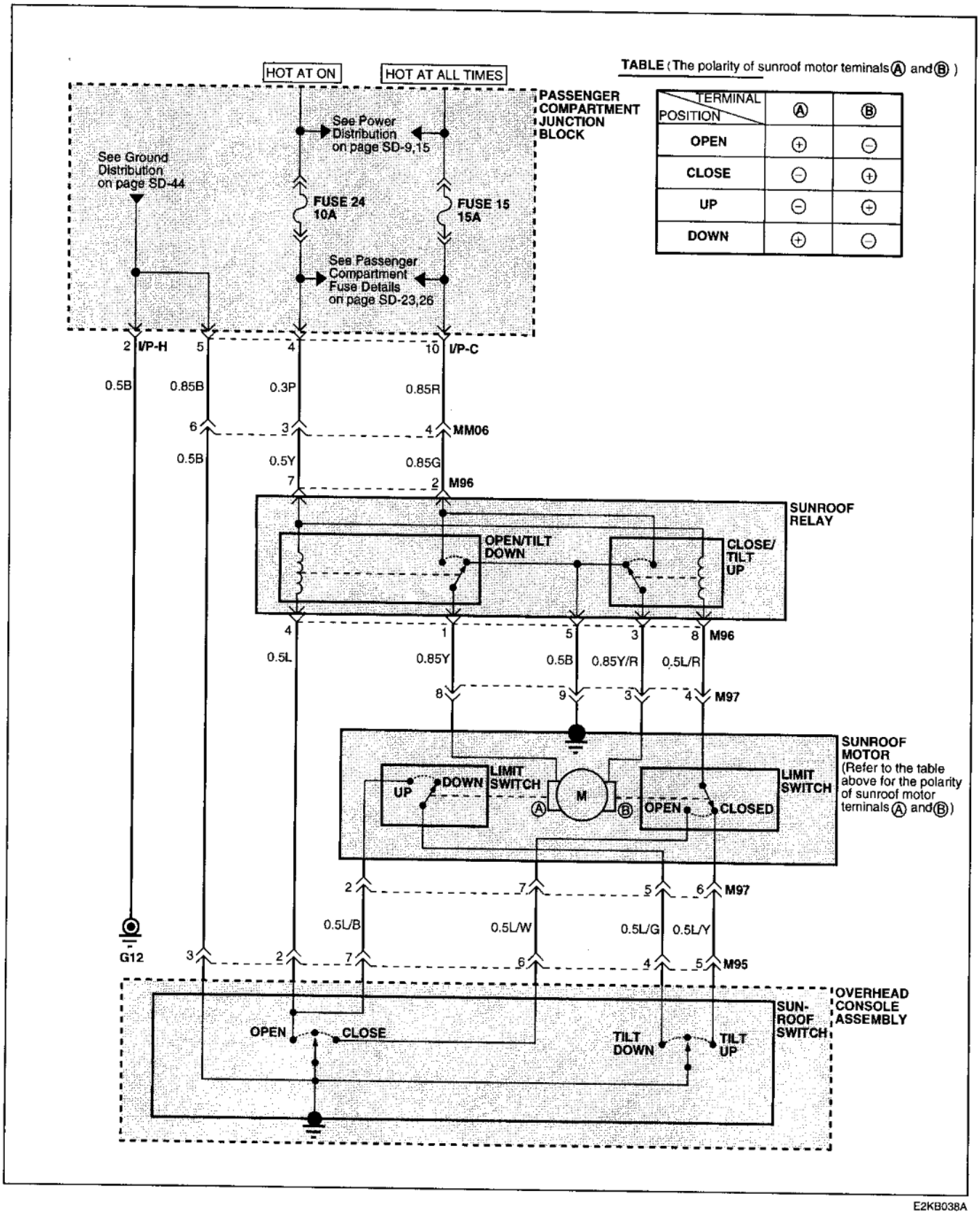


TABLE (The polarity of sunroof motor terminals Ⓐ and Ⓑ)

TERMINAL / POSITION	Ⓐ	Ⓑ
OPEN	⊕	⊖
CLOSE	⊖	⊕
UP	⊖	⊕
DOWN	⊕	⊖

E2KB038A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
M95	Overhead console assembly	CL-8
M96	Sunroof relay	CL-8
M97	Sunroof motor	CL-8
Connectors		
I/P-C		CL-9
I/P-H		CL-9
MM06		CL-9
Ground		
G12		CL-26

Circuit Description

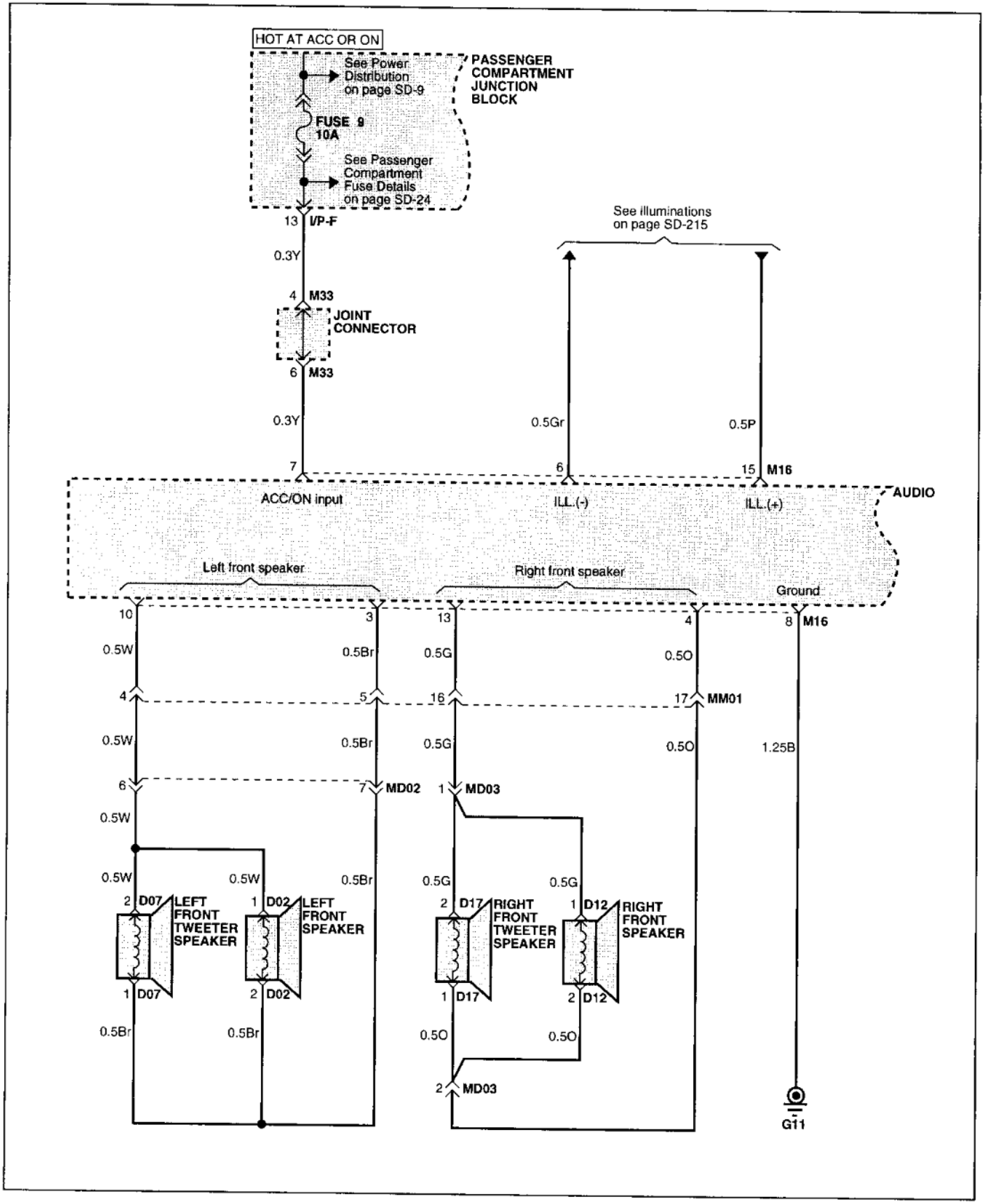
Battery voltage is supplied at all times to open/tilt down and close/tilt up sunroof relay contacts. Open/tilt down relay and close/tilt up relay coils are also supplied battery voltage when the ignition switch is ON. When the ignition switch is ON, and the open switch is depressed, the open/tilt down relay coil is energized and battery voltage is then supplied to the sunroof motor through the open/tilt down relay contact. The motor is grounded through the close/tilt up relay contact.

When the ignition switch is ON, and the close switch is depressed, the close/tilt up relay coil is energized through the roof open/close limit switch. When the sunroof is open, the roof open/close limit switch always contacts the open position. The tilt up and tilt down switch works similarly to the open switch. The polarity of the voltage applied to the sunroof motor through the sunroof relay contacts changes according to the switch positions.

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AUDIO SYSTEM E2KB0390

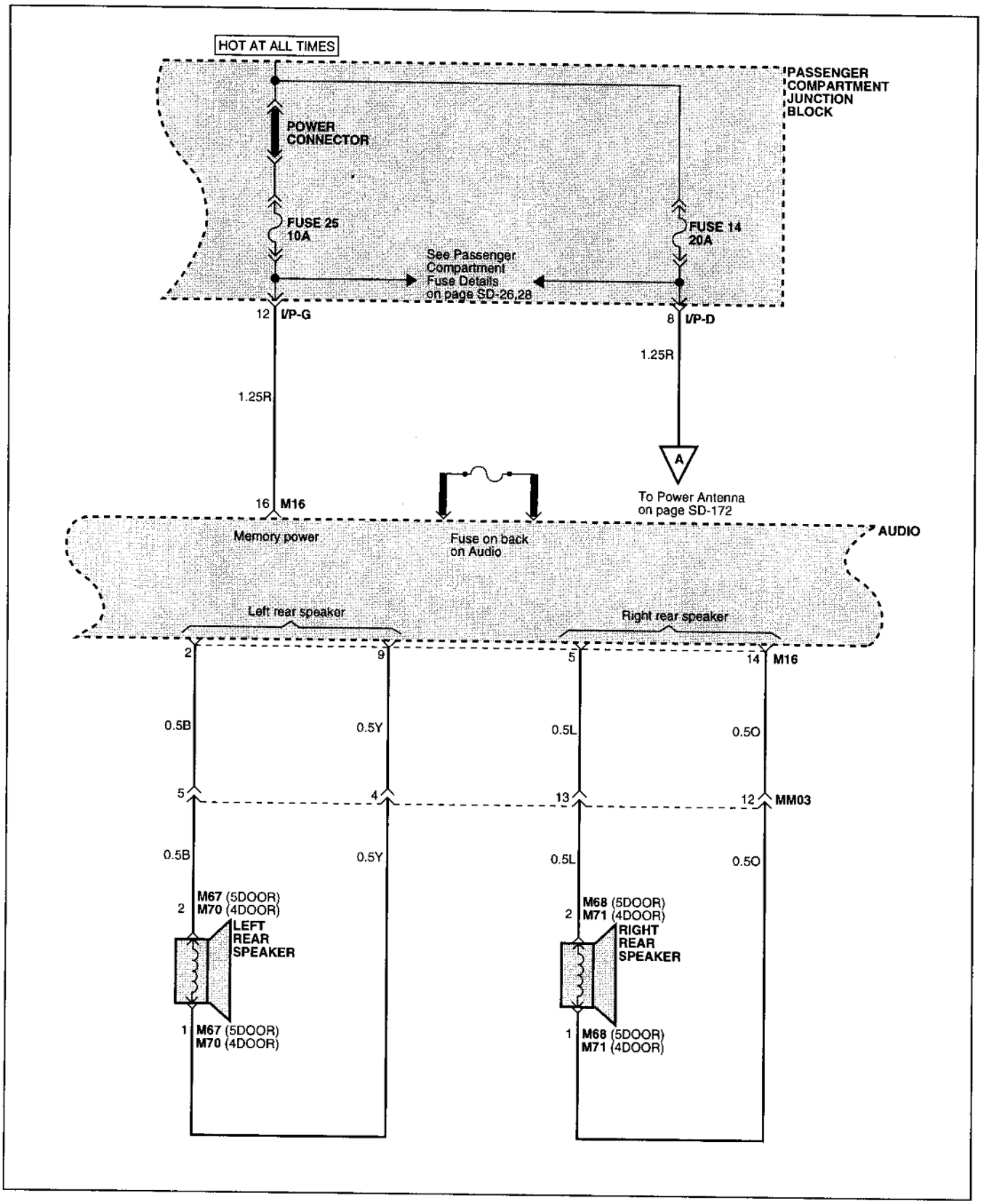
AUDIO SYSTEM (1)



E2KB039A

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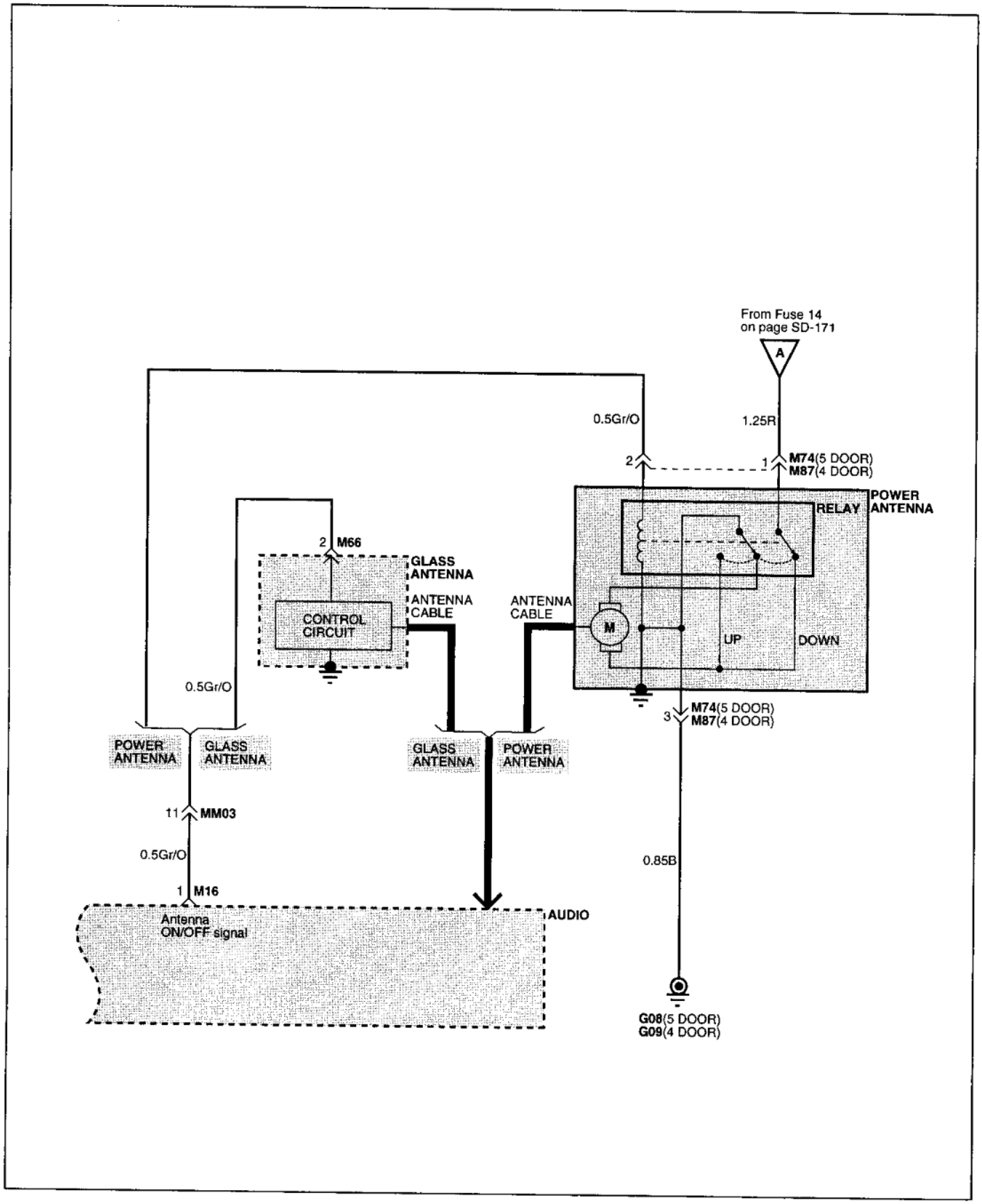
AUDIO SYSTEM (2)



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AUDIO SYSTEM (3)



E2KB039C

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D02	Left front speaker	CL-23
D07	Left front tweeter speaker	CL-23
D12	Right front speaker	CL-23
D17	Right front tweeter speaker	CL-23
M16	Audio	CL-3
M33	Joint connector	CL-4
M66	Glass antenna	CL-6
M70	Left rear speaker (4Door)	CL-6
M71	Right rear speaker (4Door)	CL-6
M87	Power antenna (4Door)	CL-7
Connectors		
I/P-D		CL-9
I/P-F		CL-9
I/P-G		CL-9
MD02		CL-8
MD03		CL-8
MM01		CL-9
MM03		CL-9
Grounds		
G09		CL-25
G11		CL-25

Circuit Description

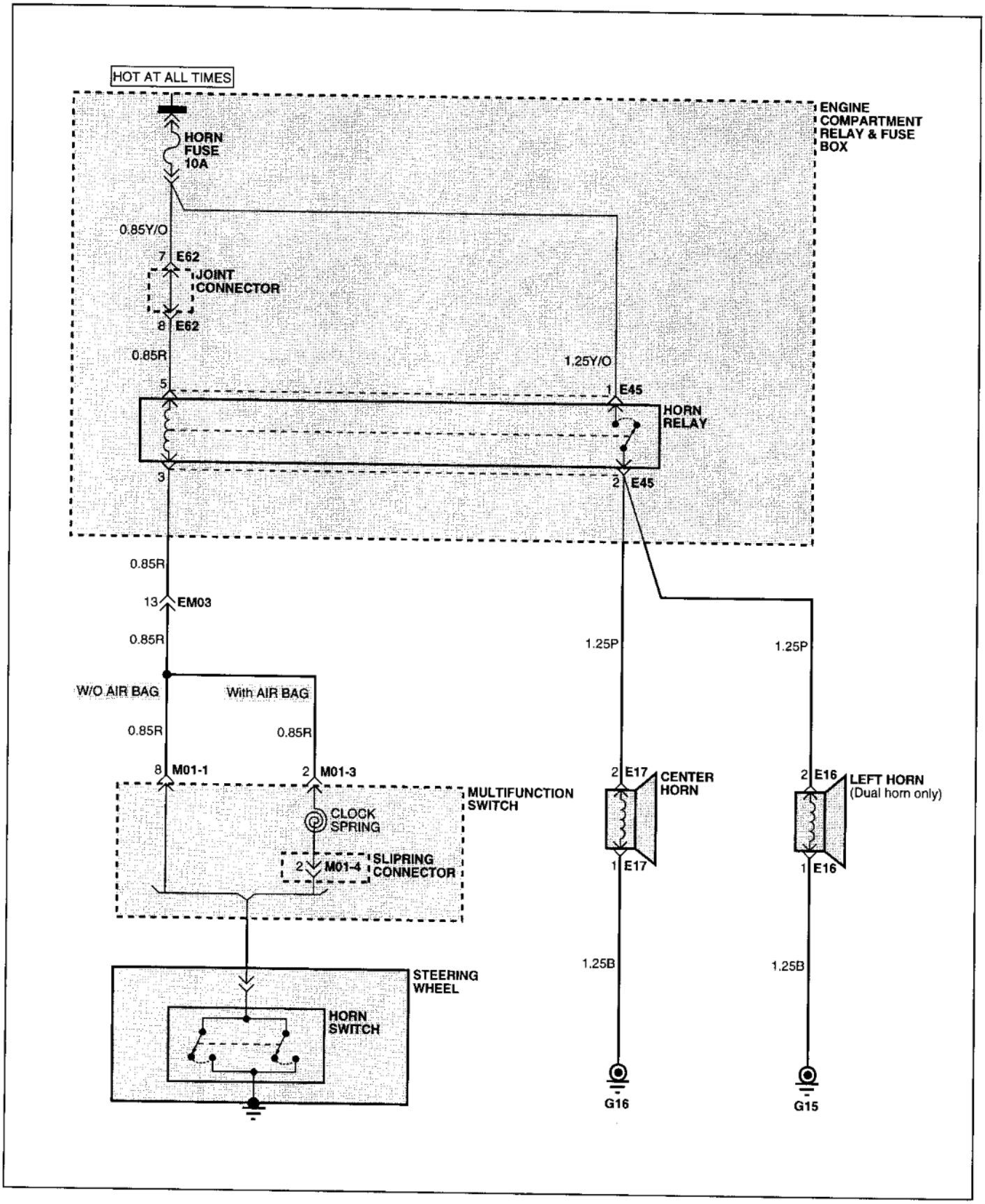
The audio receives battery voltage at all times from fuse 25 and fuse 14 to maintain memory function and power antenna operation. Fuse 9 supplies battery voltage to the audio when the ignition switch is in ACC or ON for audio operation and displays. The audio is grounded at G11 and a noise filter is installed on the rear side of the audio case.

The power antenna can move (up/down) when the antenna ON/OFF signal is applied to the power antenna relay coil (coil energized). Battery voltage is applied to the power antenna motor through the closed relay contact and the antenna up/down switch.

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HORNS E2KB0400

HORNS (1)



E2KB040A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E17	Center horn	CL-11
E45	Horn relay	CL-12
E62	Joint connector	CL-12
M01–1	Multifunction switch	CL-2
M01–3	Multifunction switch	CL-2
M01–4	Slipring connector	CL-2
Connector		
EM03		CL-13
Grounds		
G15		CL-26
G16		CL-26

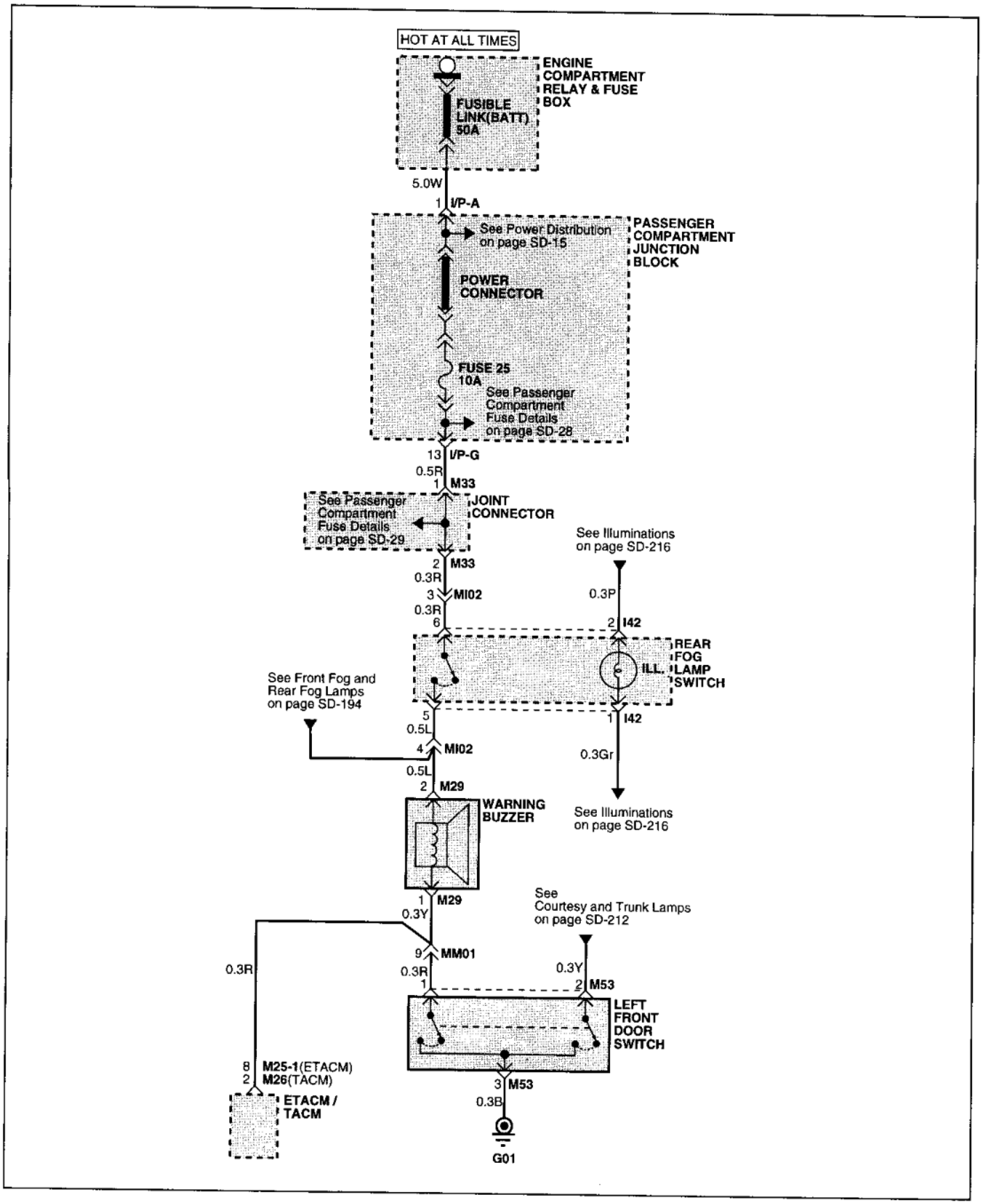
Circuit Description

Battery voltage is applied at all times to both the coil and the contacts of the horn relay through the horn fuse. With the horn switch depressed, ground is provided to the coil of the horn relay (coil energized) through the horn switch, and then battery voltage is supplied to the horns through the closed relay contacts. The horns sound.

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REAR FOG AUDIBLE WARNING E2KB0410

REAR FOG AUDIBLE WARNING (1)



E2KB041A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
I42	Rear fog lamp switch	CL-15
M33	Joint connector	CL-4
M25–1	ETACM	CL-3
M26	TACM	CL-3
M29	Warning buzzer	CL-3
M53	Left front door switch	CL-5
Connectors		
I/P-A		CL-9
I/P-G		CL-9
MI02		CL-8
MM01		CL-9
Ground		
G01		CL-25

Circuit Description

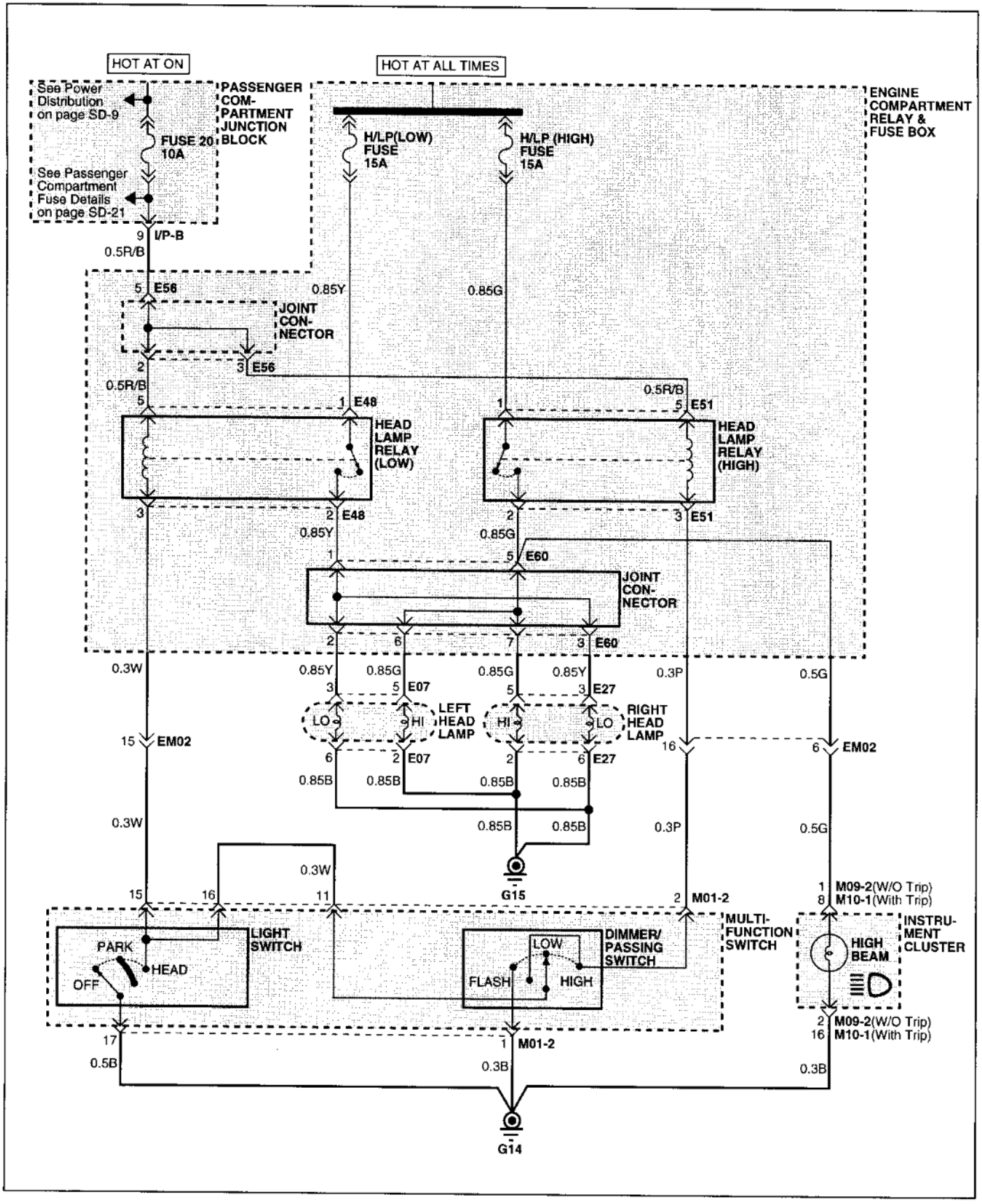
Battery voltage and ground are provided to the warning buzzer through the rear fog lamp switch and the left front door switch respectively.
With the light switch turned to PARK or HEAD, the rear fog lamps can be unintentionally turned on and it may dazzle other road users.

To alert the driver that the rear fog lamp switch is ON, the warning buzzer sounds whenever the rear fog lamp switch is ON and the left front door switch is closed (the door opened).

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HEAD LAMPS E2KB0420

HEAD LAMPS (1)



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E2KB042A

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E07	Left head lamp	CL-10
E27	Right head lamp	CL-11
E48	Head lamp relay (Low)	CL-12
E51	Head lamp relay (High)	CL-12
E56	Joint connector	CL-12
E60	Joint connector	CL-12
M01–2	Multifunction switch	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
Connectors		
EM02		CL-13
I/P-B		CL-9
Grounds		
G14		CL-26
G15		CL-26

Circuit Description

Low Beam Operation

With the ignition switch in ON and the light switch in HEAD, battery voltage is applied to the coil of the head lamp relay (Low) from fuse 20. Ground is provided to the relay coil through the light switch. Battery voltage from the head lamp fuse (Low) is then provided to the low beam head lamps through the closed contacts of the head lamp relay (Low). The low beam head lamps light.

High Beam Operation

With the ignition switch in ON, the light switch in HEAD and the dimmer/passing switch in HIGH, battery voltage is applied to the coil of the head lamp relay (High) through fuse 20. Ground is provided to the relay coil through the dimmer/passing switch. Battery voltage from the head lamp fuse (High) is then provided to the high beam head lamps and to the high beam indicator in the instrument cluster through the closed contacts of the head lamp relay (High). The high beam head lamps light.

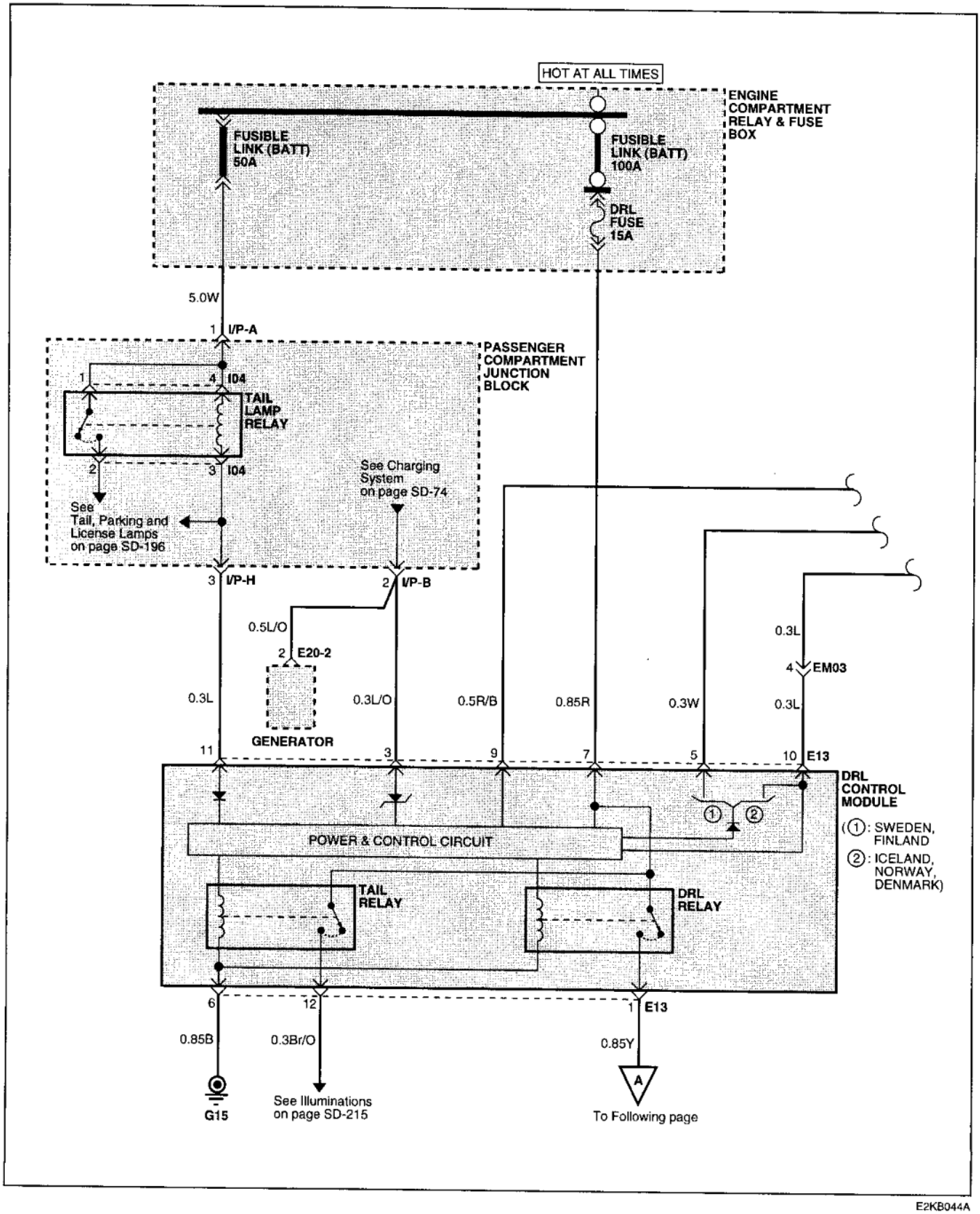
Flash Operation

The flash feature works with the light switch in all positions (OFF, PARK or HEAD). With the ignition switch in ON and the dimmer/passing switch in FLASH, ground is provided to the the head lamp relays (High/ Low) through the dimmer/passing switch. Battery voltage is applied to the high beam head lamps and to the high beam indicator through the closed contact of the head lamp relay (High). The high beam head lamps light as long as the dimmer/passing switch is held in the FLASH position.

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DAYTIME RUNNING LIGHTS E2KB0440

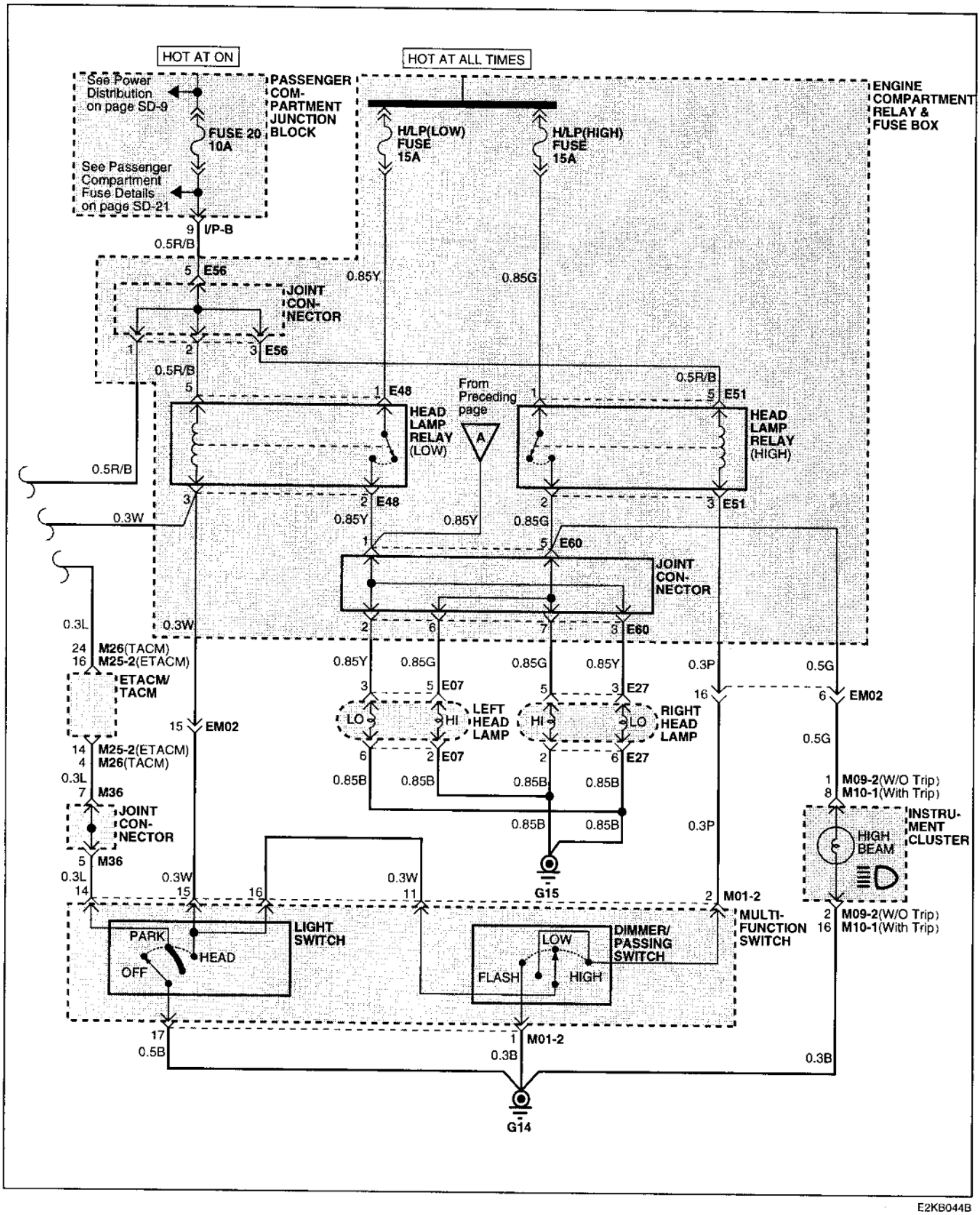
DAYTIME RUNNING LIGHTS (1)



E2KB044A

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DAYTIME RUNNING LIGHTS (2)



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E2KB044B

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E07	Left head lamp	CL-10
E20–2	Generator (S,L)	CL-11
E27	Right head lamp	CL-11
E48	Head lamp relay (Low)	CL-12
E51	Head lamp relay (High)	CL-12
E56	Joint connector	CL-12
E60	Joint connector	CL-12
I04	Tail lamp relay	CL-14
M01–2	Multifunction switch	CL-2
M09–2	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M36	Joint connector	CL-4
Connectors		
EM02		CL-13
EM03		CL-13
I/P-A		CL-9
I/P-B		CL-9
Grounds		
G14		CL-26
G15		CL-26

Circuit Description

For the visibility and safty of drivers, the daytime running lights will turn on automatically when the engine is running. Under this condition, the head lamps will illuminate with a minimal amount of load on the charging system.
As the DRL control module detects the generator running signals (engine running signal), the DRL control module controls the operation of the high beam head lamps through DRL relay coil control. Battery voltage from Fusible link (BATT) is then provided to the low beam head lamps through the DRL relay contact.

In addition to the DRL relay control, the DRL control module controls the tail relay (built in to the DRL control module) coil. Battery voltage is applied to the closed contact of the tail lamp relay and the interior illumination lamps turn on.
When the DRL module detects the engine running OFF signal, the DRL control module turns the lights off. When the DRL module detects the light switch ON (PARK or HEAD) signal, the DRL control module stops it's functions.

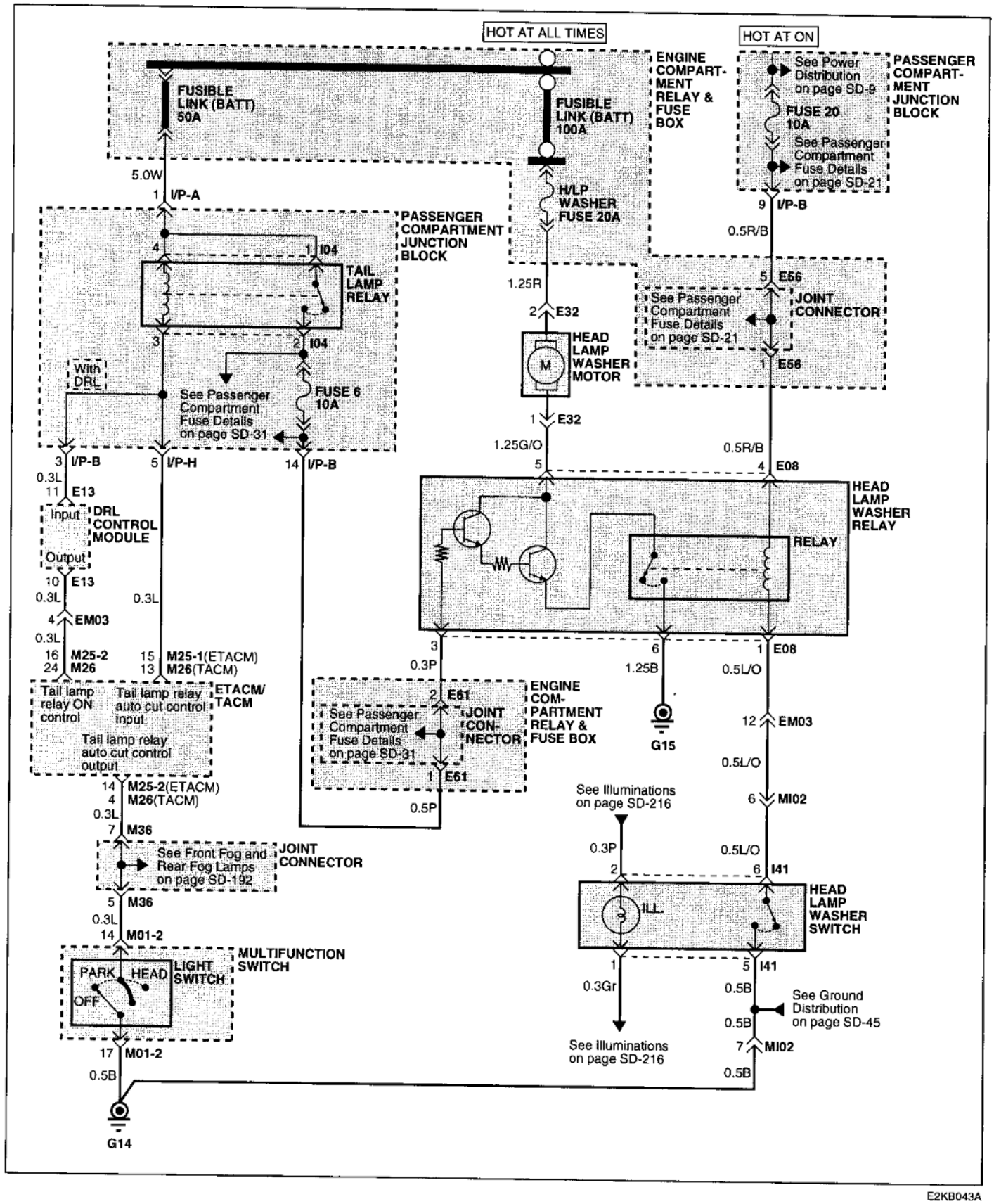
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HEAD LAMP WASHER E2KB0430

HEAD LAMP WASHER (1)



E2KB043A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E32	Head lamp washer motor	CL-12
E56	Joint connector	CL-12
E61	Joint connector	CL-12
I04	Tail lamp relay	CL-14
I41	Head lamp washer switch	CL-15
M01–2	Multifunction switch	CL-2
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M36	Joint connector	CL-4
Connectors		
EM03		CL-13
I/P-A		CL-9
I/P-B		CL-9
I/P-H		CL-9
MI02		CL-8
Grounds		
G15		CL-26
G14		CL-26

Circuit Description

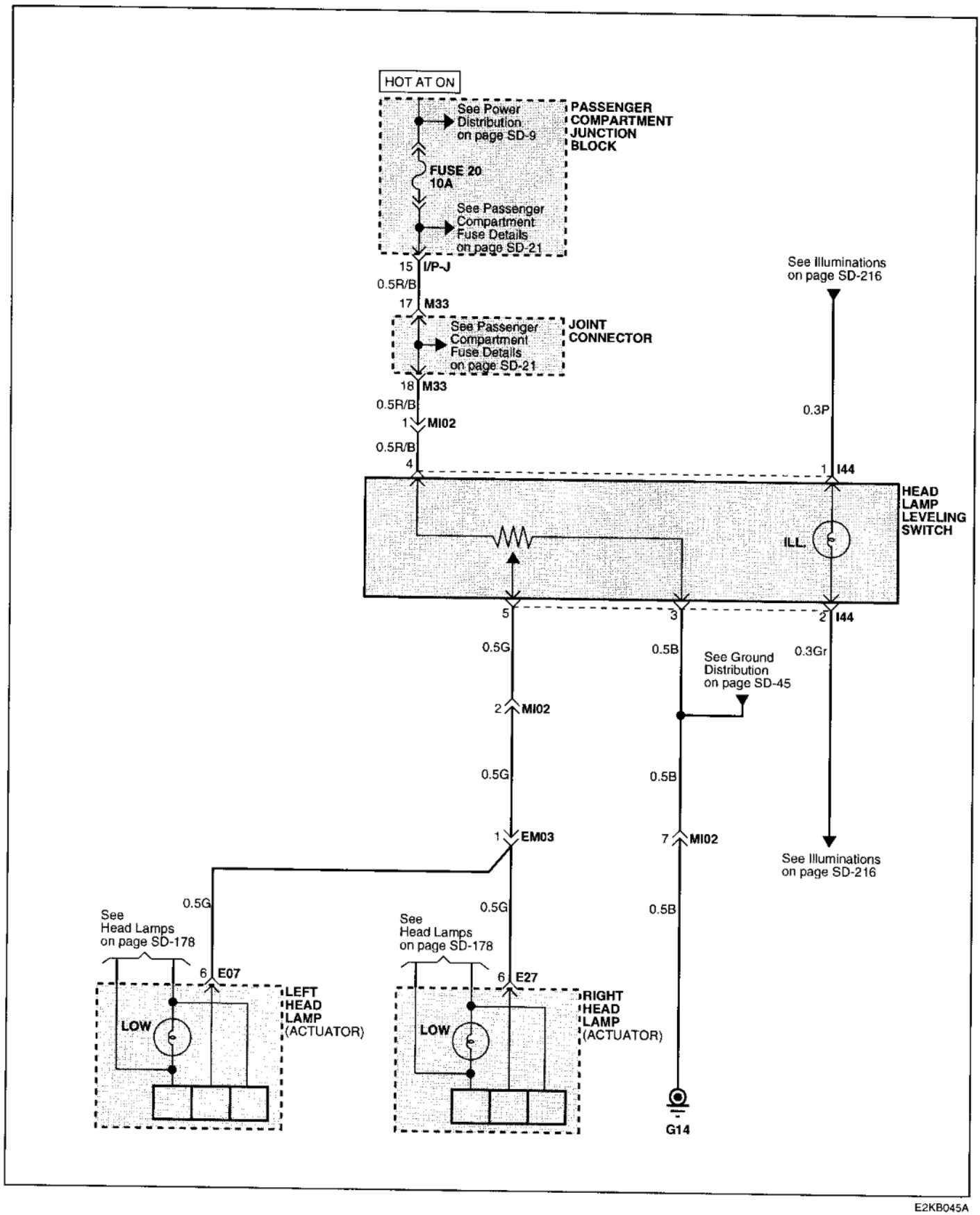
With the light switch in PARK or HEAD, the ETACM receives the signal and provides ground to the tail lamp relay coils. Battery voltage is then supplied to the base terminal of the transistor (built in to the head lamp washer relay) through the tail lamp relay contact.

When the head lamp washer switch is depressed, the head lamp washer relay coil is energized and the relay contact closes. Then, battery voltage is supplied to the head lamp washer motor, and ground (G15) is provided to the head lamp washer motor through the relay contact and the transistors.
The motor operates.

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HEAD LAMP LEVELING DEVICE E2KB0450

HEAD LAMP LEVELING DEVICE (1)



E2KB045A

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E07	Left head lamp	CL-10
E27	Right head lamp	CL-11
I44	Head lamp leveling switch	CL-15
M33	Joint connector	CL-4
Connectors		
EM03		CL-13
MI02		CL-8
Ground		
G14		CL-26

Circuit Description

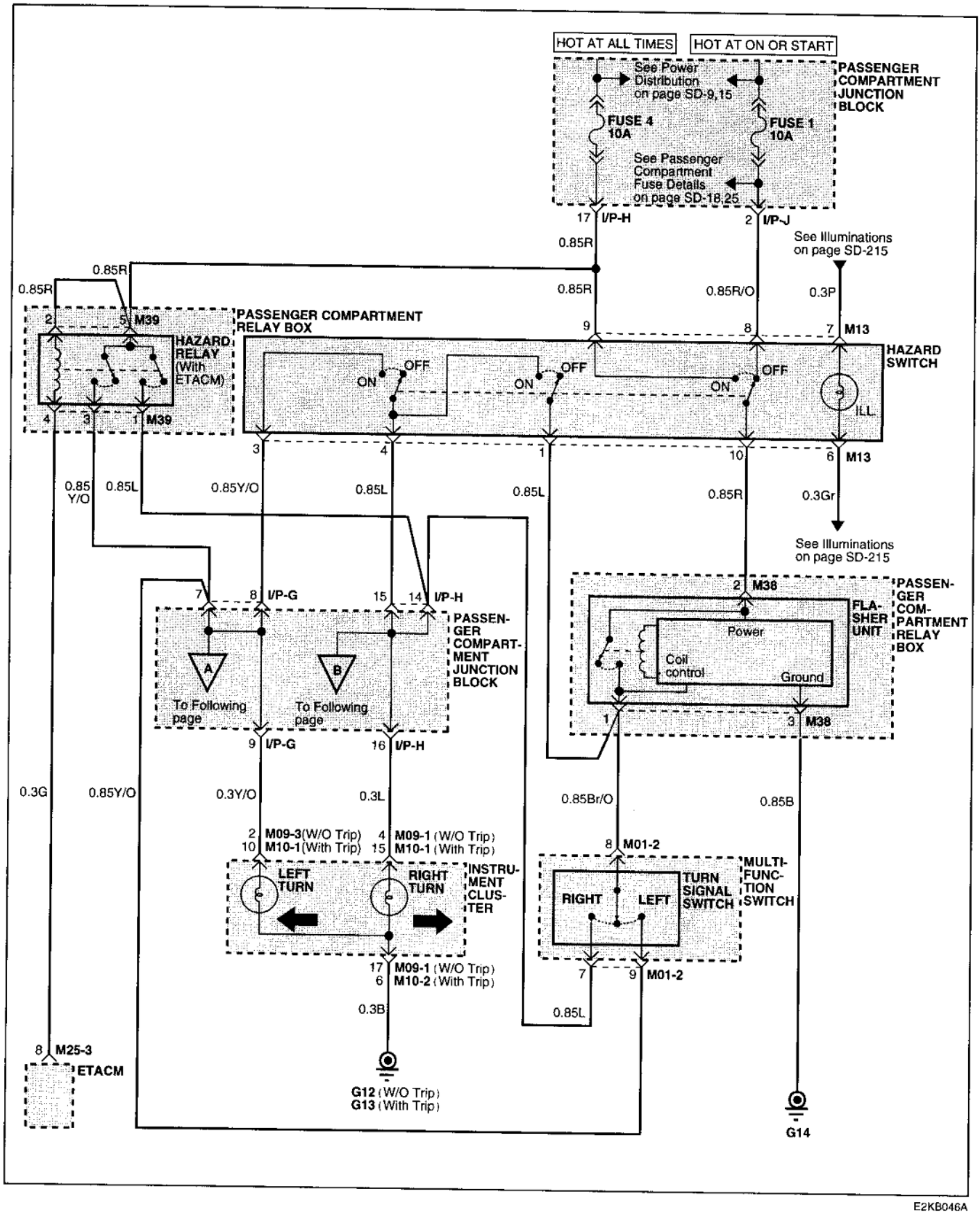
The head lamps should be aimed properly according to the number of the passengers and the loading weight in the luggage area. To adjust the headlamps beam level, turn the head lamp leveling switch. The higher the number of the switch position, the lower the head lamp beam level. Always keep the headlamps beam at the proper leveling position, or head lamp may dazzle other road users.

Battery voltage is supplied to the left/right head lamp leveling actuators in the head lamps from fuse 20 and the beam level can be controlled through a variable resistor (bulit in to the head lamp leveling switch).

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TURN AND HAZARD LAMPS E2KB0460

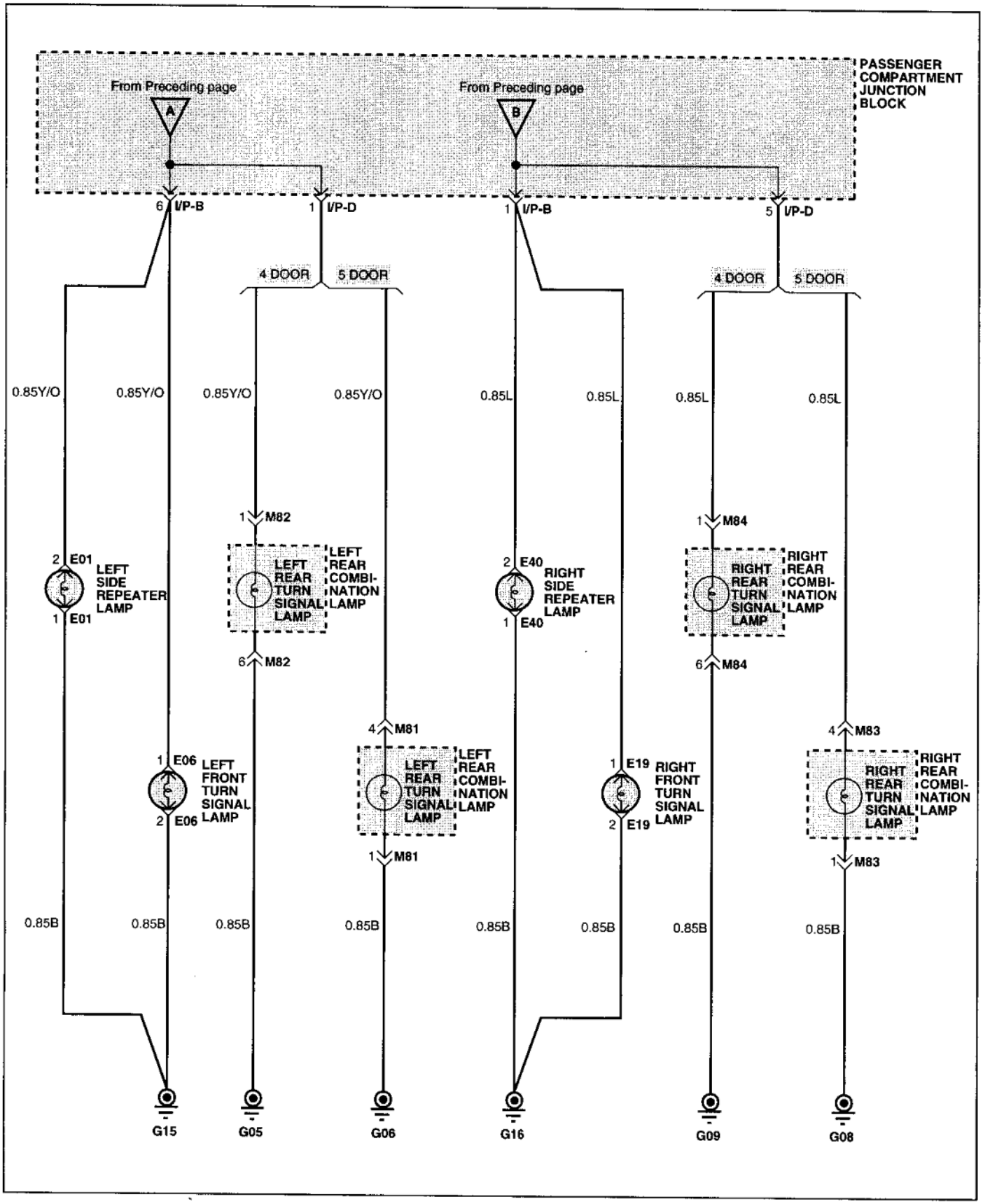
TURN AND HAZARD LAMPS (1)



E2KB046A

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TURN AND HAZARD LAMPS (2)



E2KB046B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E01	Left side repeater lamp	CL-10
E06	Left front turn signal lamp	CL-10
E19	Right front turn signal lamp	CL-11
E40	Right side repeater lamp	CL-12
M01–1	Multifunction switch	CL-2
M01–2	Multifunction switch	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (Wih Trip)	CL-3
M10–2	Instrument cluster (Wih Trip)	CL-3
M13	Hazard switch	CL-3
M25–3	ETACM	CL-3
M38	Flasher unit	CL-4
M39	Hazard relay	CL-4
M82	Left rear combination lamp (4Door)	CL-7
M84	Left rear combination lamp (4Door)	CL-7
Connectors		
I/P-B		CL-9
I/P-D		CL-9
I/P-G		CL-9
I/P-H		CL-9
I/P-J		CL-9
Grounds		
G05		CL-25
G09		CL-25
G12		CL-26
G13		CL-26
G14		CL-26
G15		CL-26
G16		CL-26

Circuit Description

Turn Signal Lamps operation

With the hazard switch in OFF and the ignition switch in ON or START, battery voltage is supplied from fuse 1 to the flasher unit. The solid-state in the flasher unit senses the turn signal switch position and controls the relay coil. Battery voltage to the turn signal switch alternately applies on and off. Voltage is applied to the left or right turn signal lamp and indicators dependent upon the turn signal switch position.

Hazard Lamps operation

With the hazard switch depressed (ON), battery voltage is supplied from fuse 4 to the flasher unit. The soild -state in the flasher unit senses the hazard switch ON signal and controls the relay coils, and then alternately applies and removes battery voltage to the left turn and right turn lamps and both indicators at the same time.

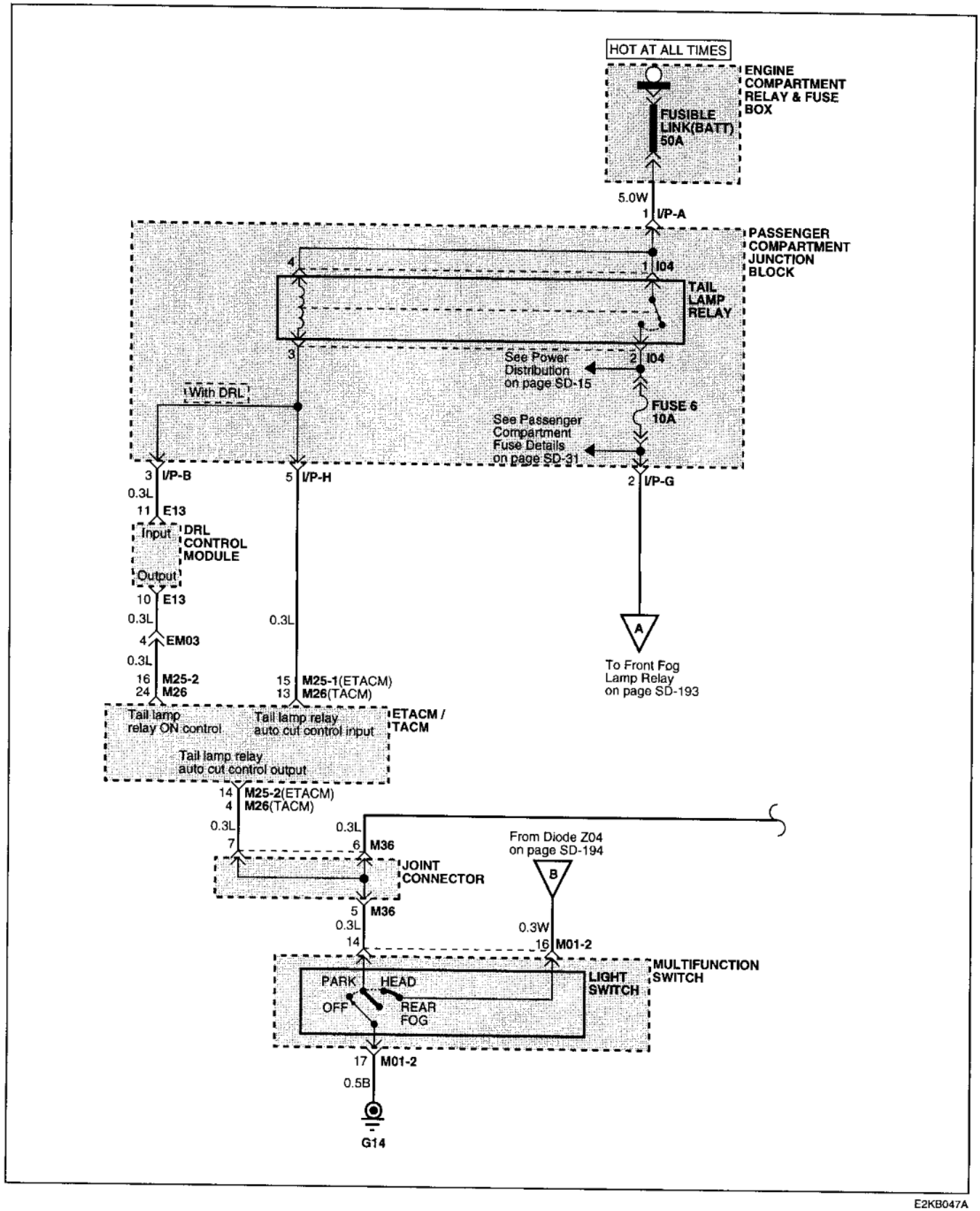
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FRONT FOG AND REAR FOG LAMPS E2KB0470

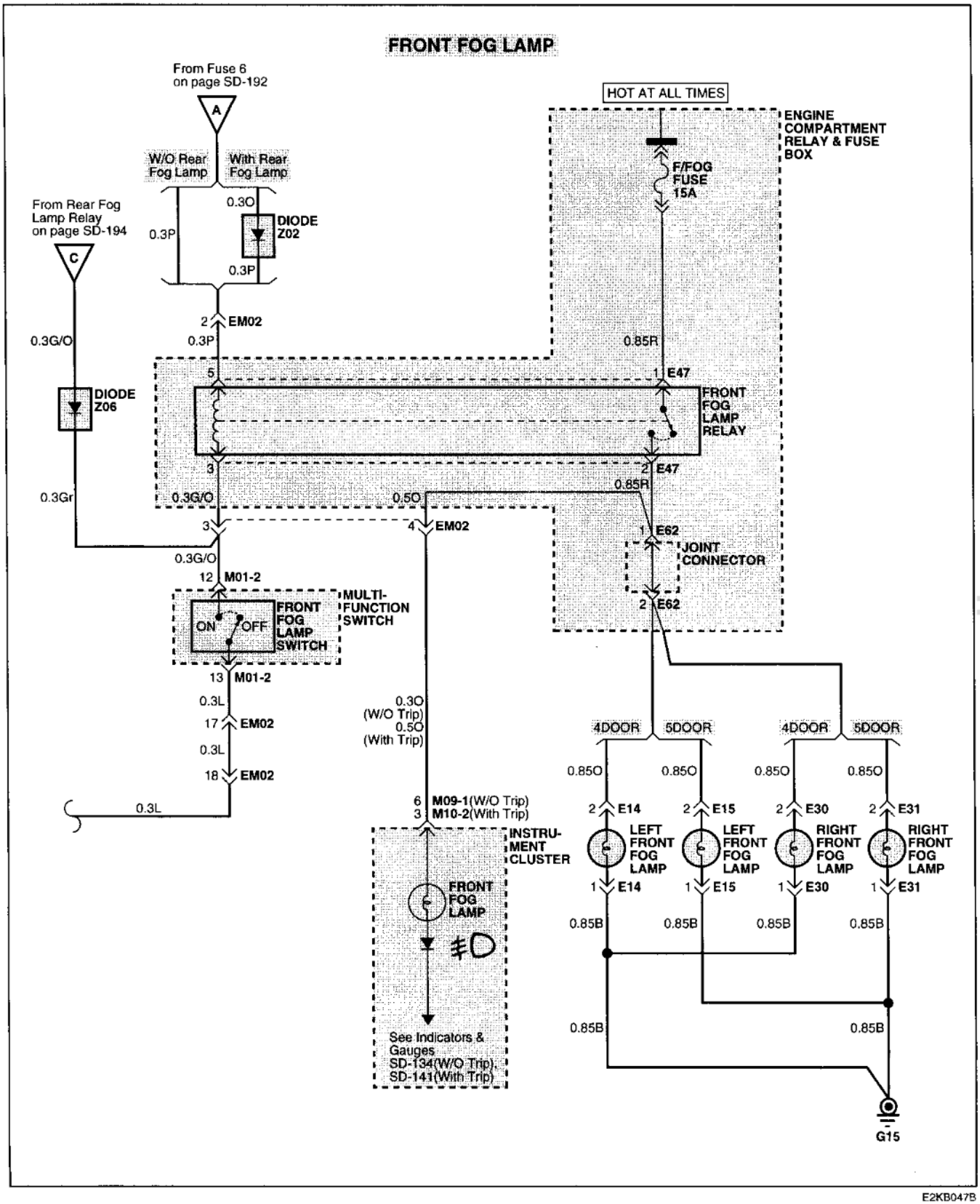
FRONT FOG AND REAR FOG LAMPS (1)



E2KB047A

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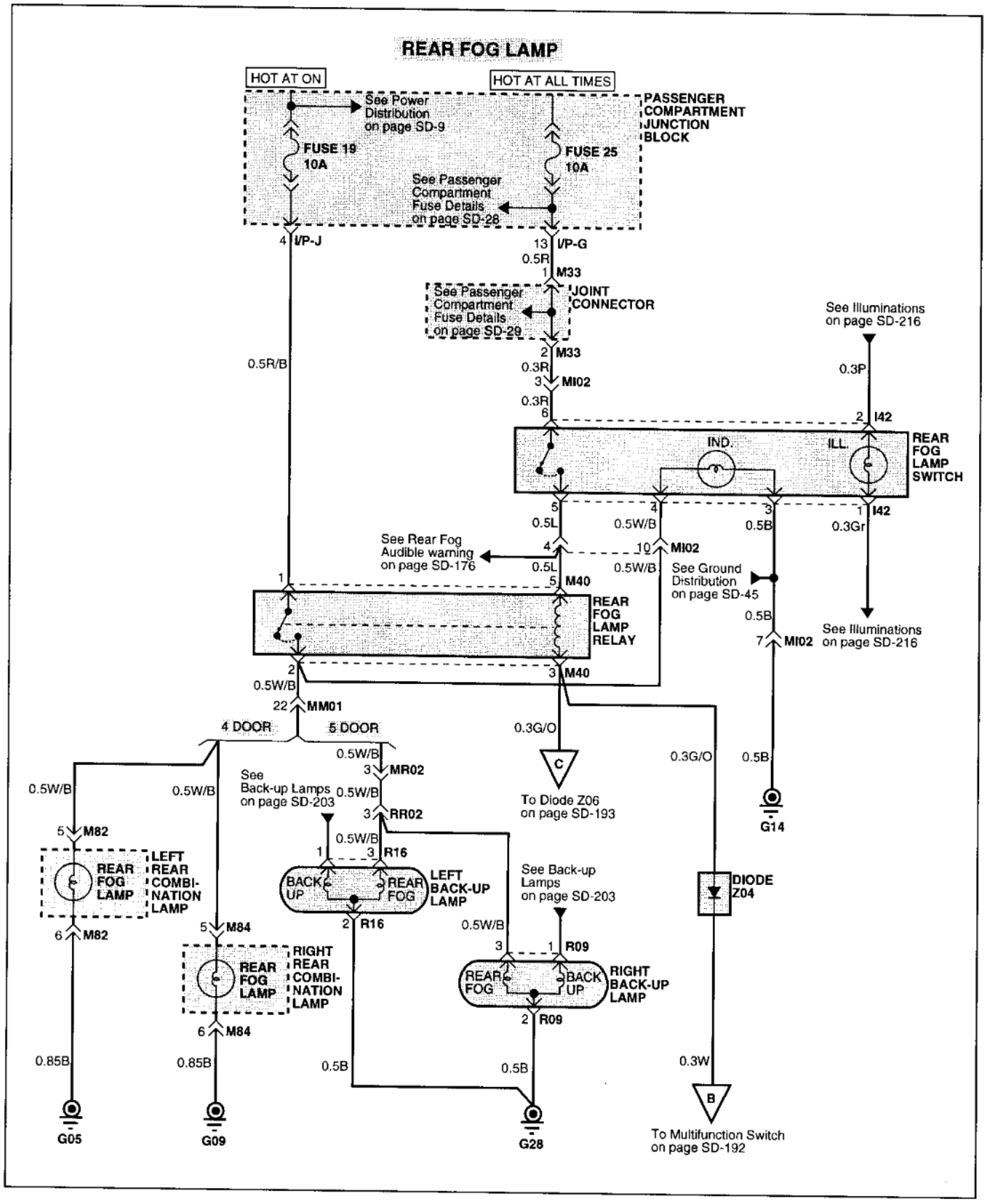
FRONT FOG AND REAR FOG LAMPS (2)



E2KB047B

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FRONT FOG AND REAR FOG LAMPS (3)



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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E14	Left front fog lamp (4Door)	CL-10
E15	Left front fog lamp (5Door)	CL-10
E30	Right front fog lamp (4Door)	CL-12
E31	Right front fog lamp (5Door)	CL-12
E47	Front fog lamp relay	CL-12
E62	Joint connector	CL-12
I04	Tail lamp relay	CL-14
I42	Rear fog lamp switch	CL-15
M01–2	Multifunction switch	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–2	Instrument cluster (With Trip)	CL-3
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M40	Rear fog lamp relay	CL-5
M82	Left rear cambination lamp (4Door)	CL-7
M84	Right rear cambination lamp (4Door)	CL-7
Connector		
EM02		CL-13
I/P-A		CL-9
I/P-B		CL-9
I/P-H		CL-9
MI02		CL-9
MM01		CL-9
Grounds		
G05		CL-25
G09		CL-25
G14		CL-26
G15		CL-26
Diodes		
Z02		CL-27
Z04		CL-27

Circuit Description

Front Fog Lamps Operation

With the light switch in PARK or HEAD, the tail lamp relay coil is energized through the ETACM/ TACM. Battery voltage is applied to the front fog lamps relay coil from the closed contact of the tail lamp relay.

With the front fog lamp switch in ON, ground is provided to the coil of the fog lamp relay. Battery voltage from the front fog lamps fuse is then provided to the LEFT/RIGHT front fog lamps through the closed contact of the front fog lamp relay. The LEFT/RIGHT front fog lamps light.

Rear Fog Lamps Operation

With the light switch in PARK or HEAD, the tail lamp relay coil is energized through the ETACM/ TACM and battery voltage is applied to the closed contact of the tail lamp relay.

1. The Light Switch in PARK.

With the front fog lamp switch ON and the rear fog lamp switch ON, the rear fog lamp relay coil is energized. Battery voltage is applied to the rear fog lamps through the closed contact of the rear fog lamp relay and the rear fog lamps light.

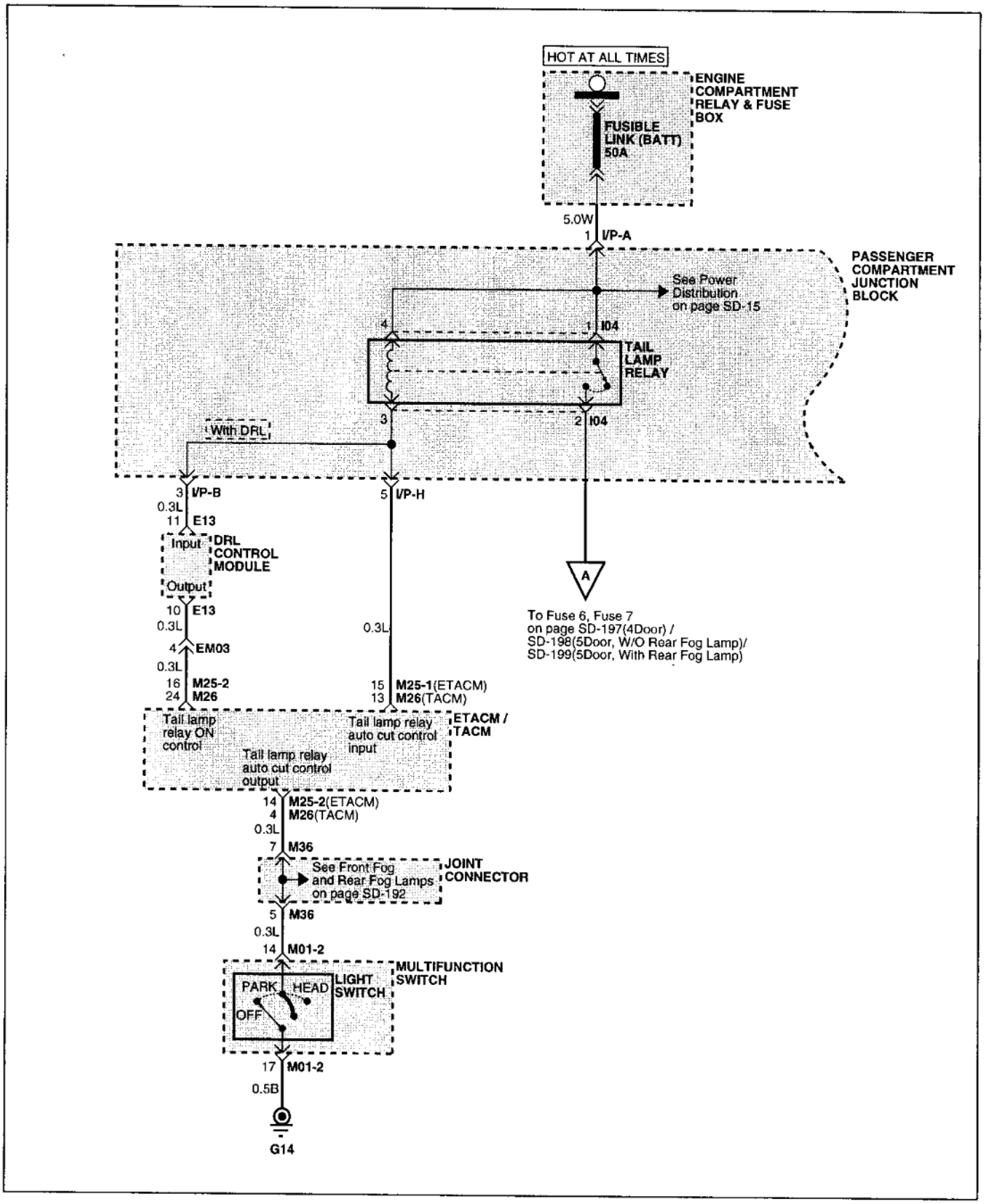
2. The Light Switch in HEAD.

With the rear fog lamp switch ON, the rear fog lamp relay coil is energized and battery voltage is applied to the rear fog lamps through the closed contact of the rear fog lamp relay and the rear fog lamps light.

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TAIL, PARKING AND LICENSE LAMPS E2KB0490

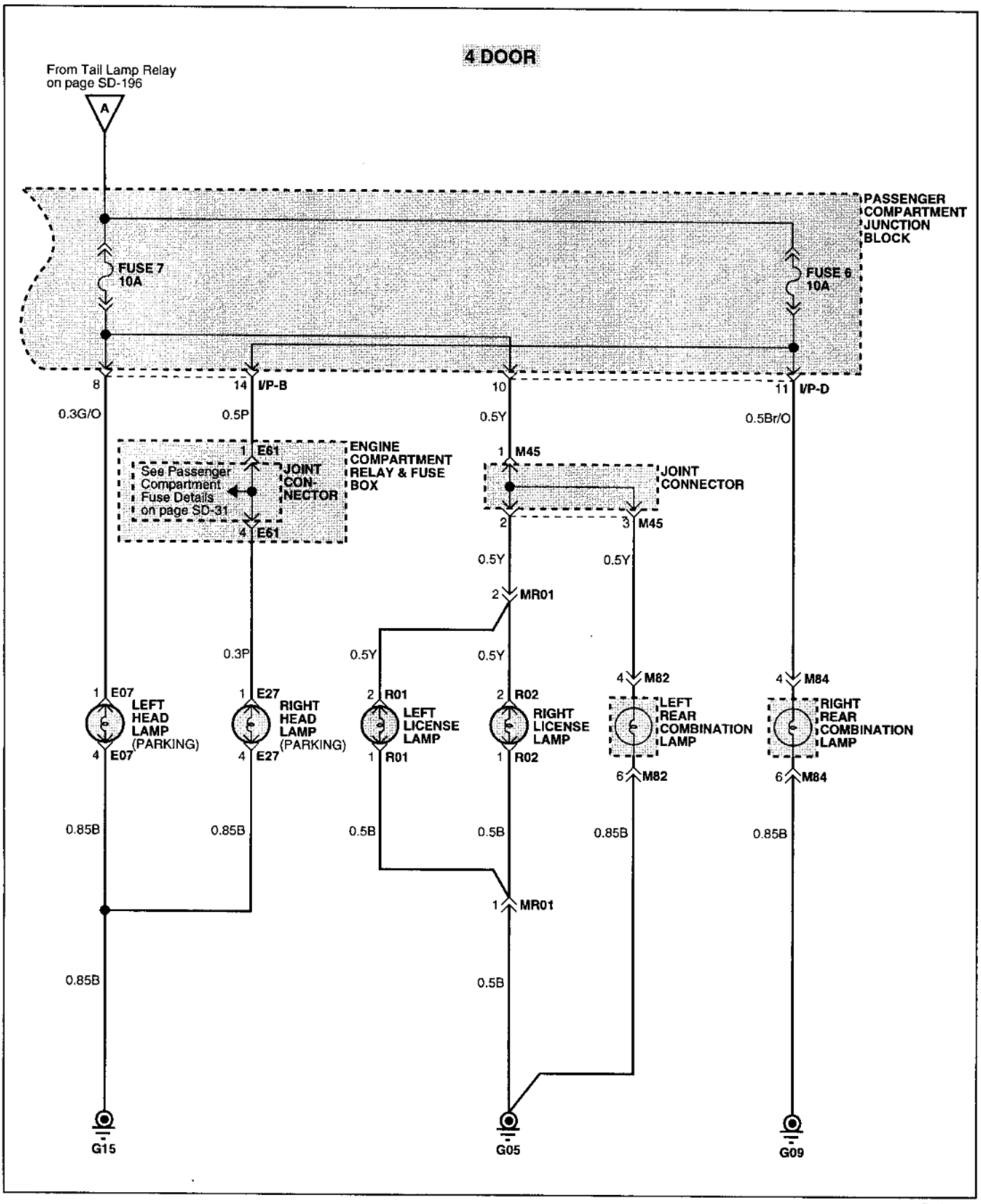
TAIL, PARKING AND LICENSE LAMPS (1)



E2KB049A

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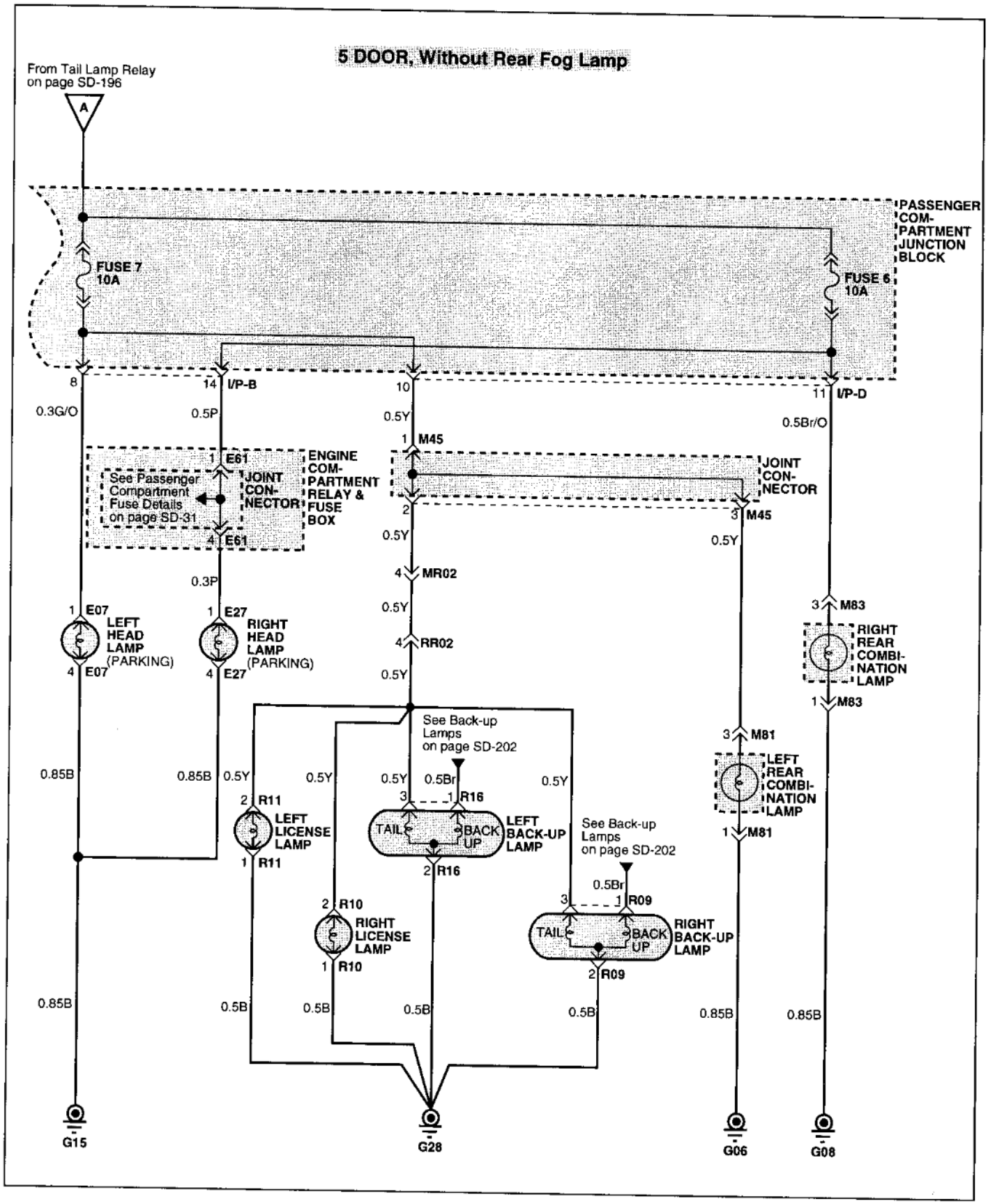
TAIL, PARKING AND LICENSE LAMPS (2)



E2KB049B

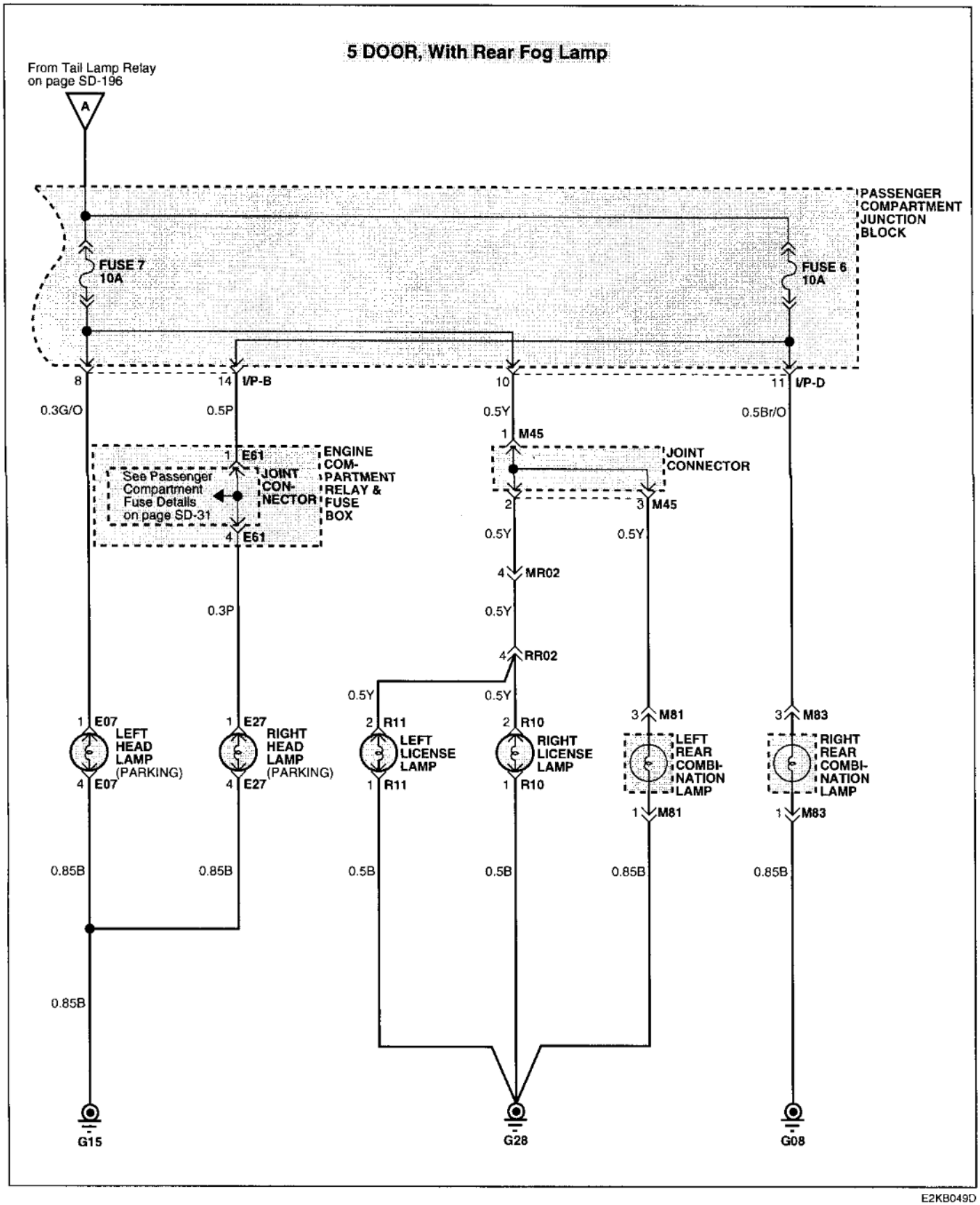
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TAIL, PARKING AND LICENSE LAMPS (3)



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TAIL, PARKING AND LICENSE LAMPS (4)



E2KB049D

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
E07	Left head lamp	CL-10
E27	Right head lamp	CL-11
E61	Joint connector	CL-12
I04	Tail lamp relay	CL-14
M01–2	Multifunction switch	CL-2
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M36	Joint connector	CL-4
M45	Joint connector	CL-5
M82	Left rear combination lamp (4Door)	CL-7
M84	Right rear combination lamp (4Door)	CL-7
R01	Left license lamp (4Door)	CL-24
R02	Right license lamp (4Door)	CL-24
Connectors		
EM03		CL-13
I/P-A		CL-9
I/P-B		CL-9
I/P-D		CL-9
I/P-H		CL-9
MR01		CL-9
Grounds		
G05		CL-25
G09		CL-25
G14		CL-26
G15		CL-26

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Circuit Description

Battery voltage is applied at all times to both the coil and contact of the tail lamp relay from Fusible link BATT. With the light switch in PARK or HEAD, the coil of the tail lamp relay is grounded through the ETACM/ TACM.

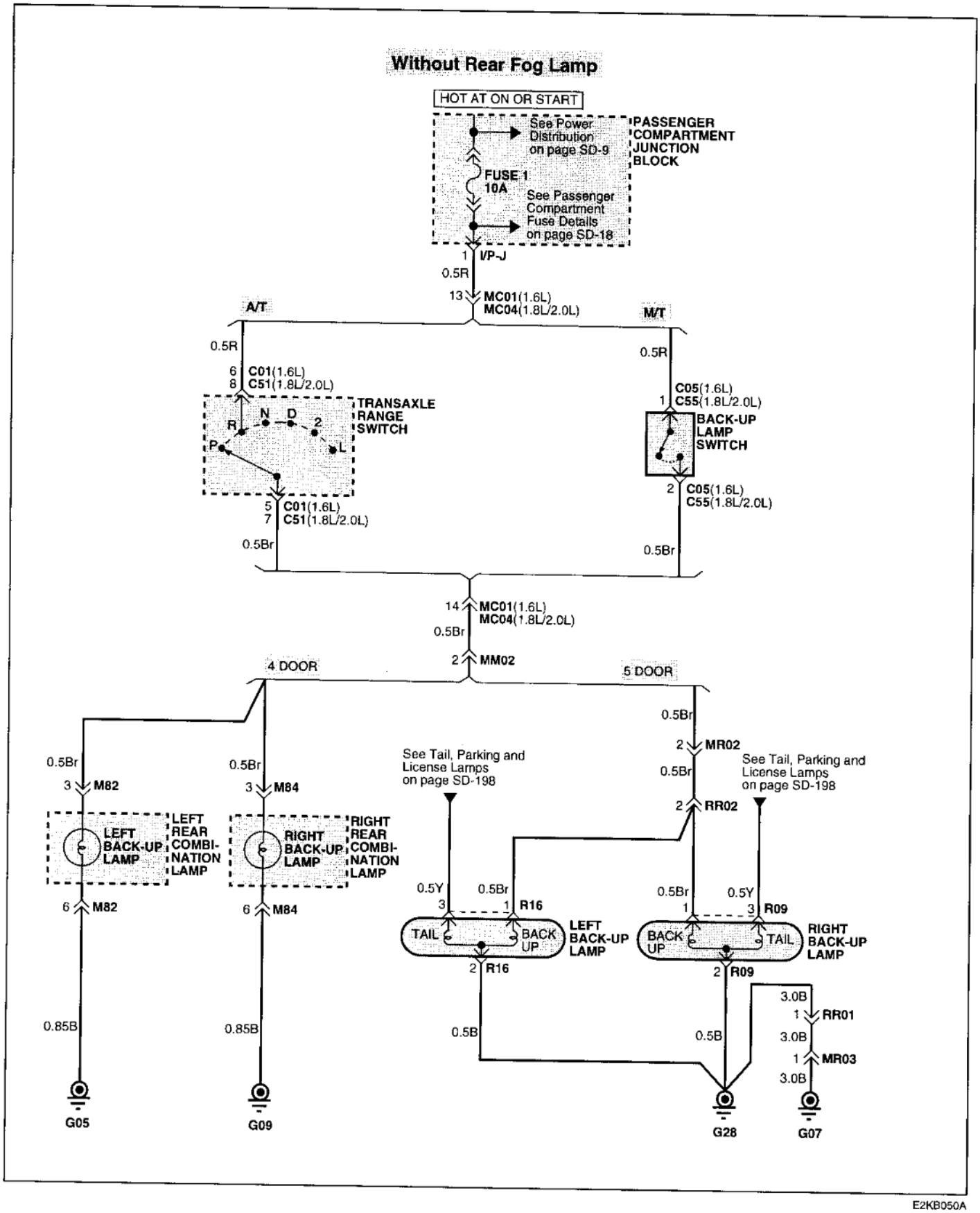
Battery voltage from fuse 6 and fuse 7 is then applied to the Left/Right head lamps, Left/Right rear combination lamps and Left/Right license lamps through the closed tail lamp relay contact and all the lamps go on.

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BACK-UP LAMPS E2KB0500

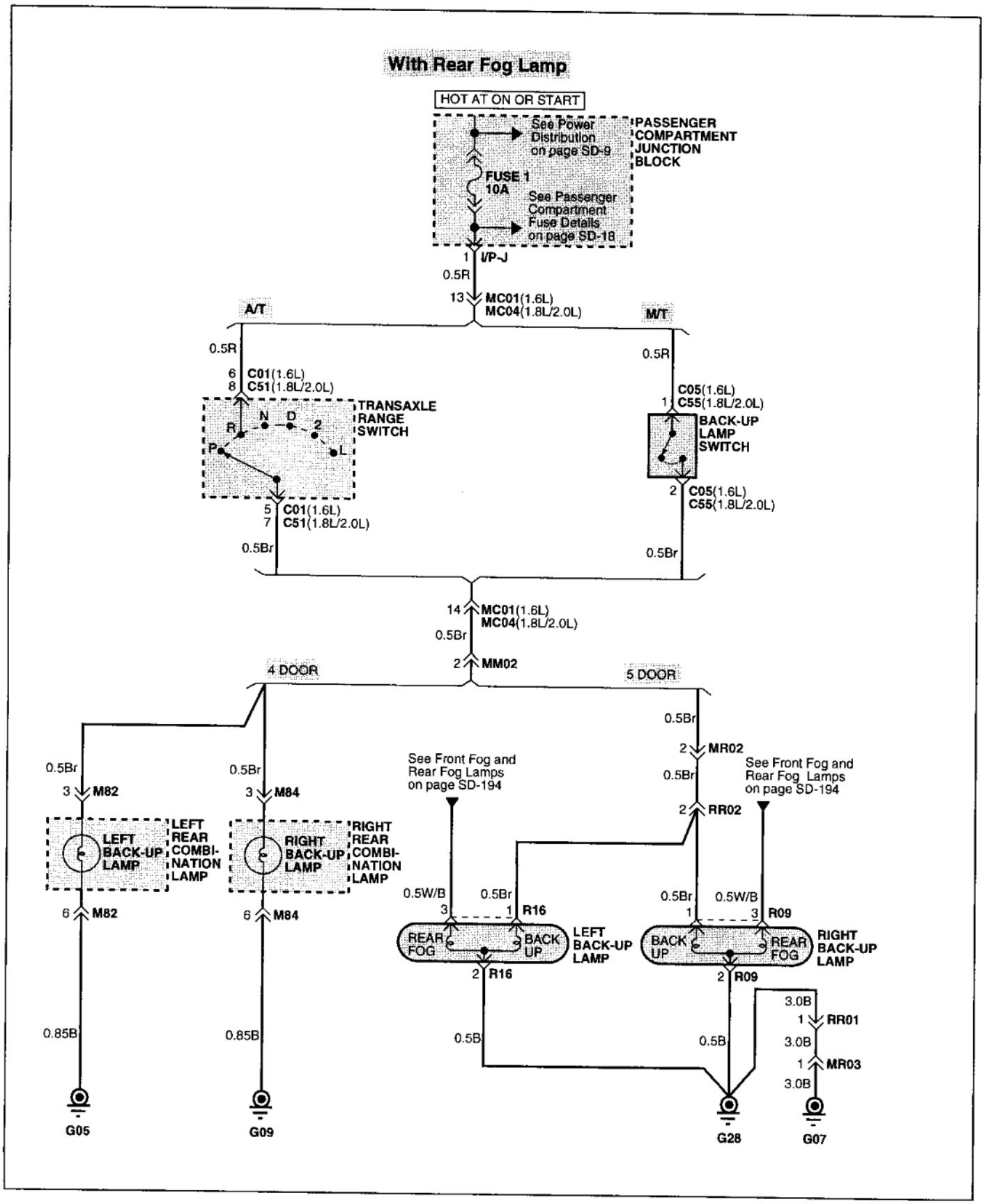
BACK-UP LAMPS (1)



E2KB050A

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BACK-UP LAMPS (2)



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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C01	Transaxle range switch (1.6L)	CL-16
C05	Back-up lamp switch (1.6L)	CL-16
C51	Transaxle range switch (1.8L/2.0L)	CL-18
C55	Back-up lamp switch (1.8L/2.0L)	CL-19
M82	Left rear combination lamp (4Door)	CL-7
M84	Right rear combination lamp (4Door)	CL-7
Connectors		
I/P-J		CL-9
MC01		CL-8
MC04		CL-8
MM02		CL-9
Grounds		
G05		CL-25
G09		CL-25

Circuit Description

With the ignition switch in ON or START, battery voltage is supplied applied from fuse 1 to the back-up lamp switch (Manual transaxle) or to the transaxle range switch (Automatic transaxle). When the transaxle is in reverse, battery voltage is applied to the back-up lamps and the back-up lamps go on.

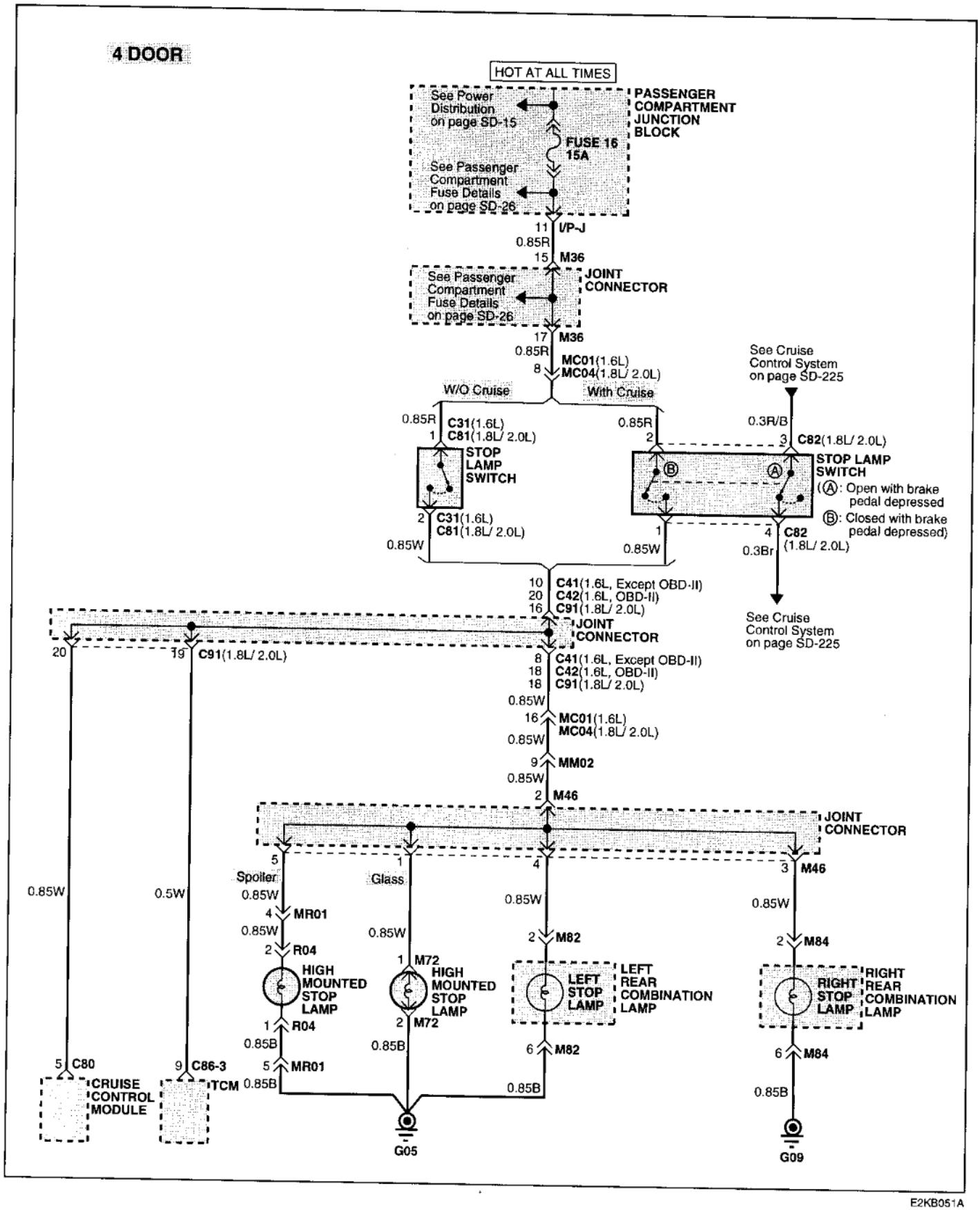
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STOP LAMPS E2KB0510

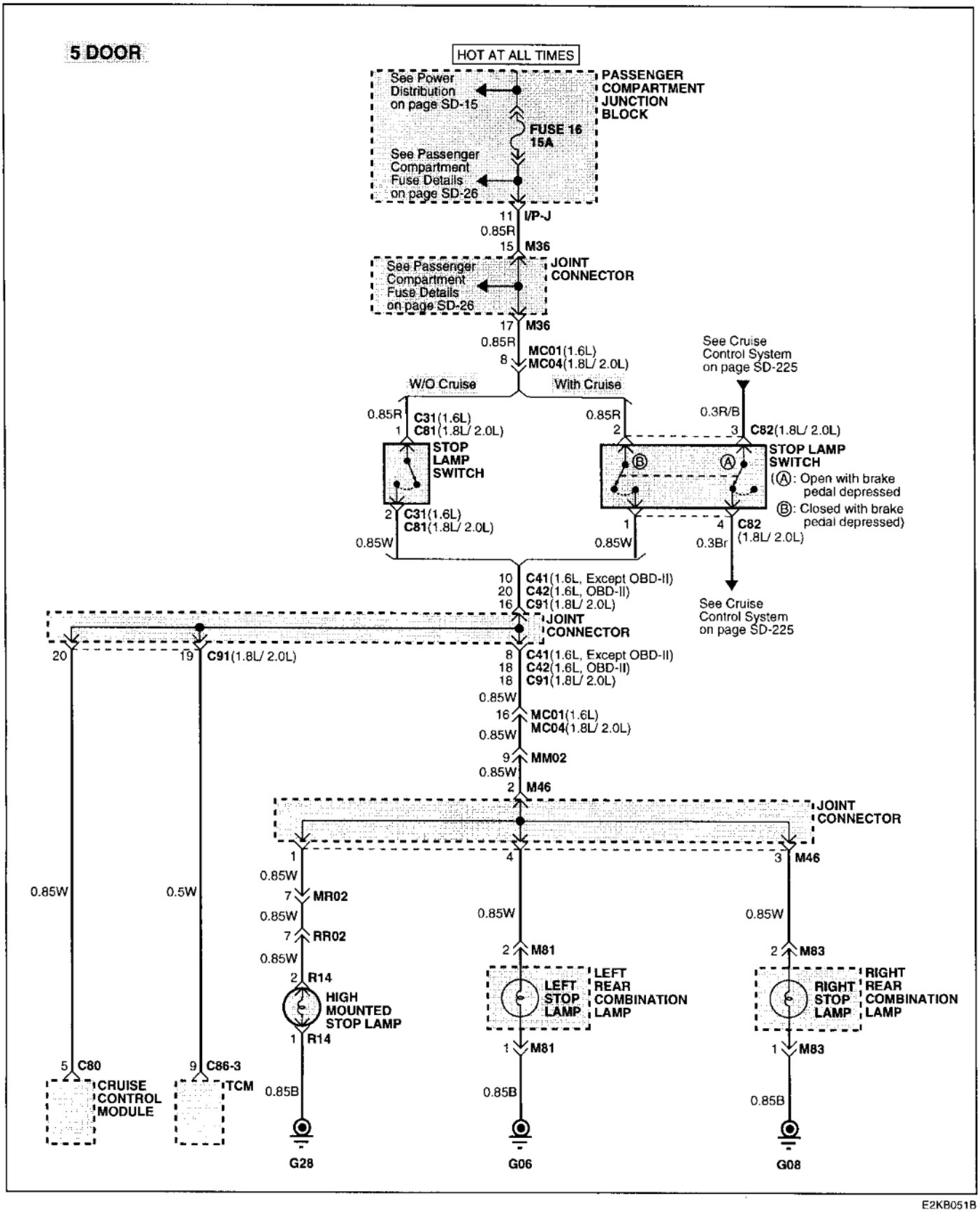
STOP LAMPS (1)



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STOP LAMPS (2)



E2KB051B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C31	Stop lamp switch (1.6L)	CL-18
C41	Joint connector (1.6L, Except OBD-II)	CL-18
C42	Joint connector (1.6L, OBD-II)	CL-18
C80	Cruise contorl module (1.8L/2.0L)	CL-21
C81	Stop lamp switch (1.8L/2.0L, W/O Cruise)	CL-21
C82	Stop lamp switch (1.8L/2.0L, With Cruise)	CL-21
C86–3	TCM (1.8L/2.0L)	CL-21
C91	Joint connector (1.8L/2.0L)	CL-22
M36	Joint connector	CL-4
M46	Joint connector	CL-5
M72	High-mounted stop lamp (4Door, Glass)	CL-6
M82	Left rear combination lamp (4Door)	CL-7
M84	Right rear combination lamp (4Door)	CL-7
R04	High-mounted stop lamp (4Door, Spoiler)	CL-24
Connnectors		
I/P-J		CL-9
MC01		CL-8
MC04		CL-8
MM02		CL-9
Grounds		
G05		CL-25
G09		CL-25

Circuit Description

Battery voltage is applied to the stop lamp switch at all times from fuse 16. With the brake pedal depressed, the stop lamp switch is closed and battery voltage is applied to all the stop lamps (Left/Right stop lamps and high-mounted stop lamp) and lamps go on.

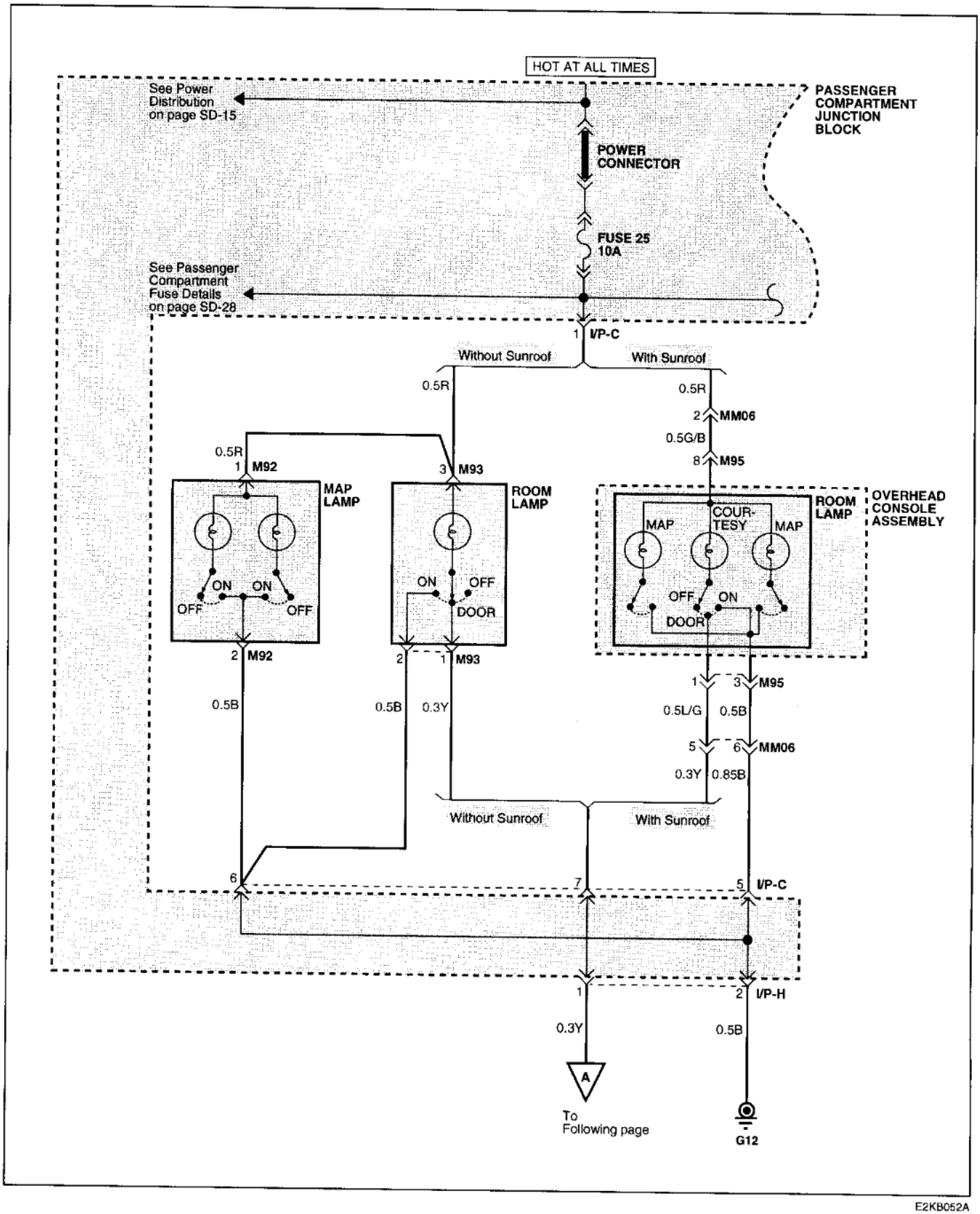
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COURTESY AND TRUNK LAMPS E2KB0520

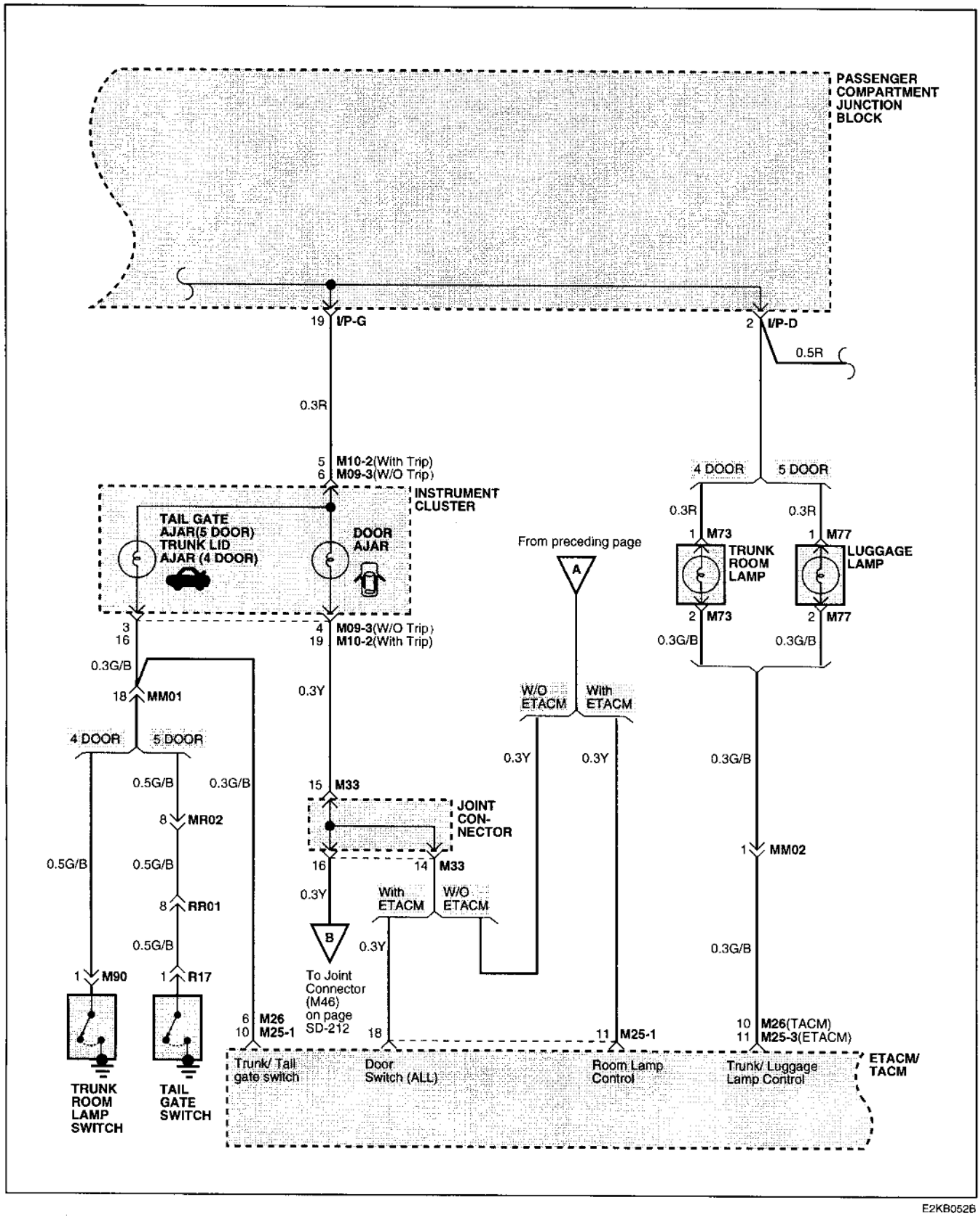
COURTESY AND TRUNK LAMPS (1)



E2KB052A

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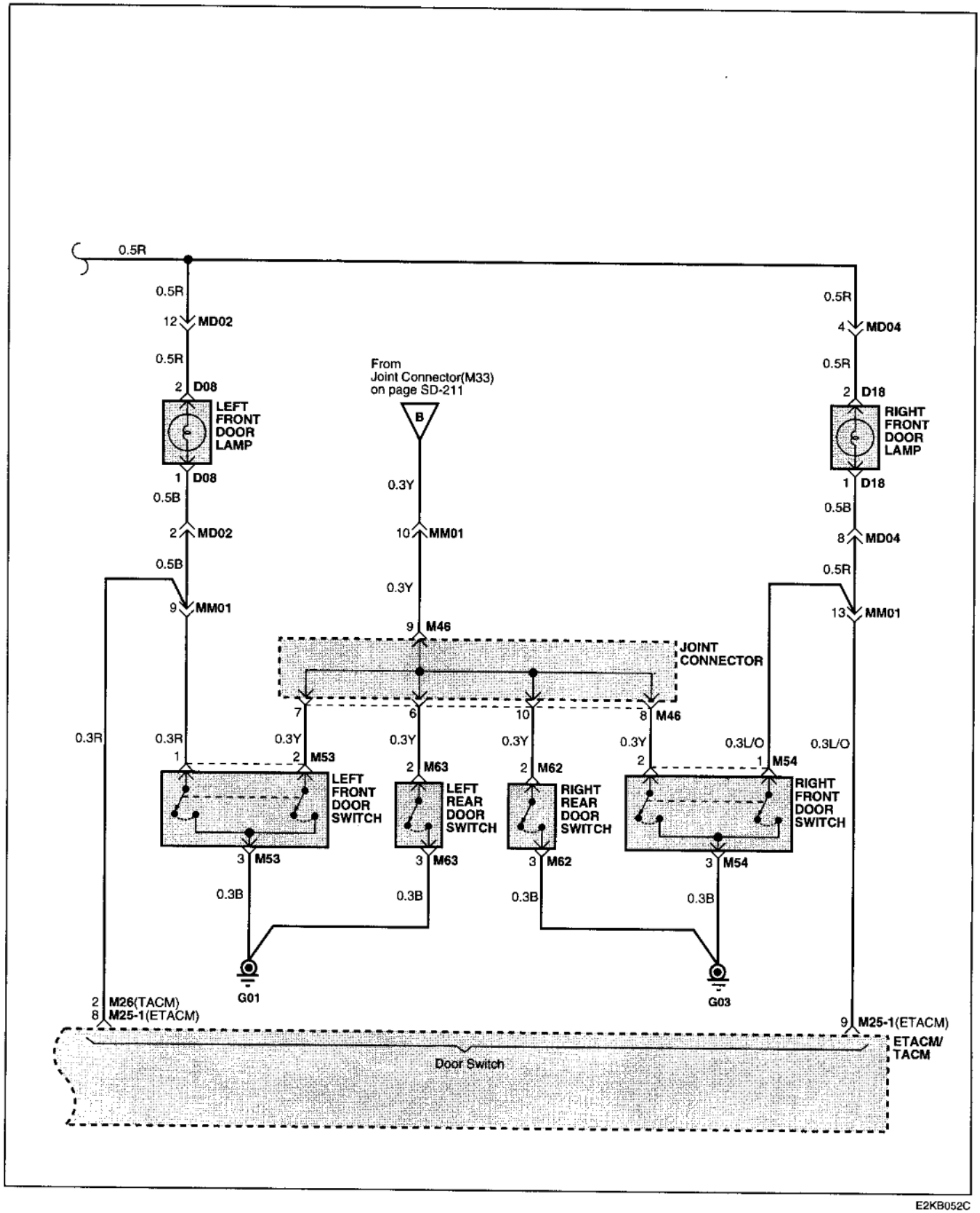
COURTESY AND TRUNK LAMPS (2)



E2KB052B

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COURTESY AND TRUNK LAMPS (3)



E2KB052C

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
D08	Left front door lamp	CL-23
D18	Right front door lamp	CL-23
M09–3	Instrument cluster (W/O Trip)	CL-2
M10–2	Instrument cluster (With Trip)	CL-3
M25–1	ETACM	CL-3
M25–3	ETACM	CL-3
M26	TACM	CL-3
M33	Joint connector	CL-4
M46	Joint connector	CL-5
M53	Left front door switch	CL-5
M54	Right front door switch	CL-5
M62	Right rear door switch	CL-6
M63	Left rear door switch	CL-6
M73	Trunk room lamp (4Door)	CL-7
M90	Trunk room lamp switch (4Door)	CL-7
M92	Map lamp	CL-7
M93	Room lamp	CL-7
M95	Overhead console assembly	CL-8
Connectors		
I/P-C		CL-9
I/P-D		CL-9
I/P-G		CL-9
I/P-H		CL-9
MD02		CL-8
MD04		CL-8
MM01		CL-9
MM02		CL-9
MM06		CL-9
Grounds		
G01		CL-25
G03		CL-25
G12		CL-26

Circuit Description

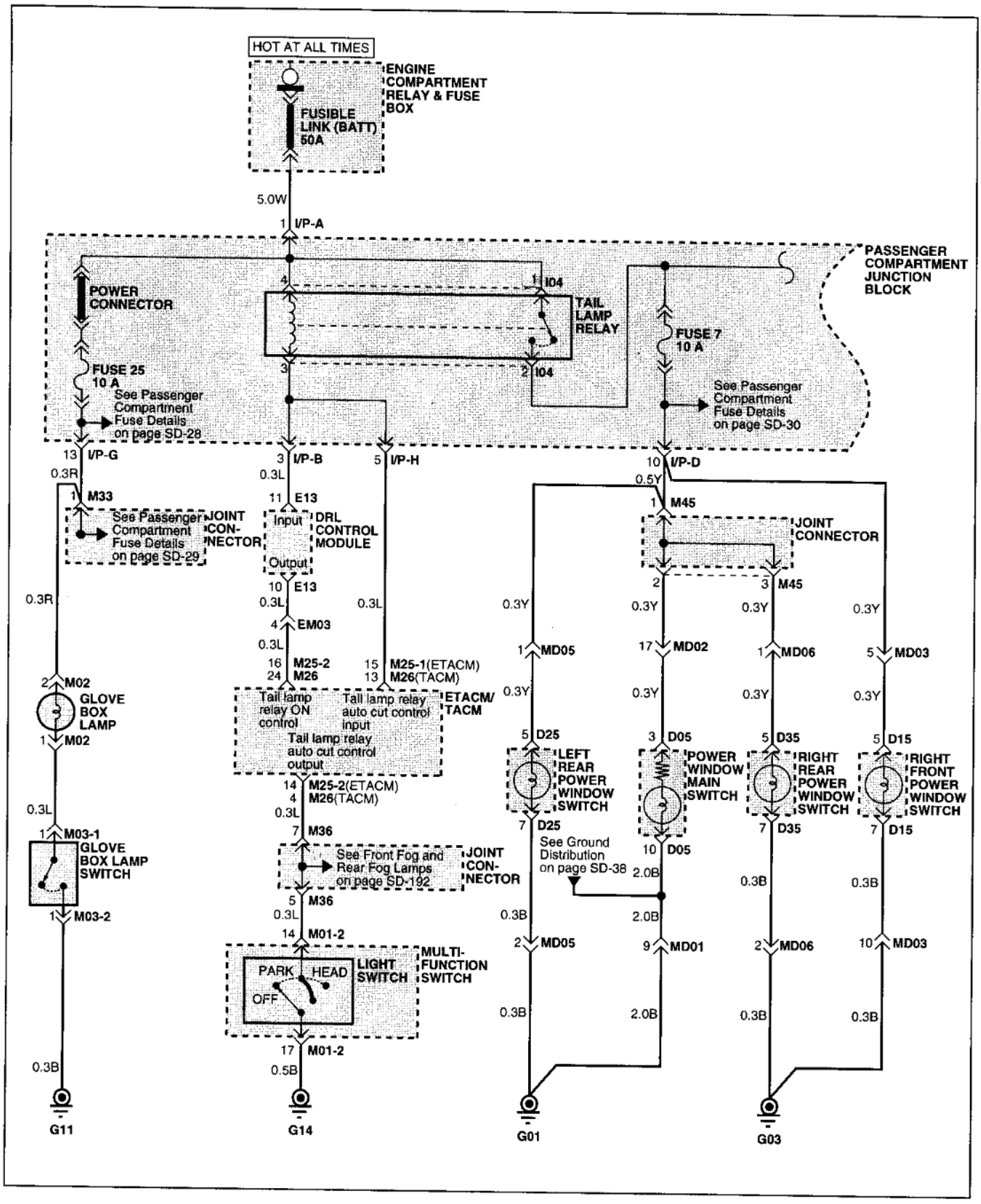
Battery voltage is applied at all times from fuse 25 to the map lamps, the trunk lamp (4 Door), the luggage room lamp (5 Door), the door ajar, the trunk ajar warning indicators and the room lamp (without sunroof)/overhead console assembly (with sunroof). When the appropriate lamp switch is closed, a ground path is provided to the respective lamps through the ETACM and causing the lamps to go on.

The room lamp/overhead console assembly is controlled not only by a door switch (controlled by ETACM), but also by a room lamp switch in the room lamp/overhead console assembly. They are turned on and off manually. The room lamp can be turned on and off manually, depending on the position of the room lamp switch. The room lamp can also be turned off so it will not come on with the door open.

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ILLUMINATIONS E2KB0530

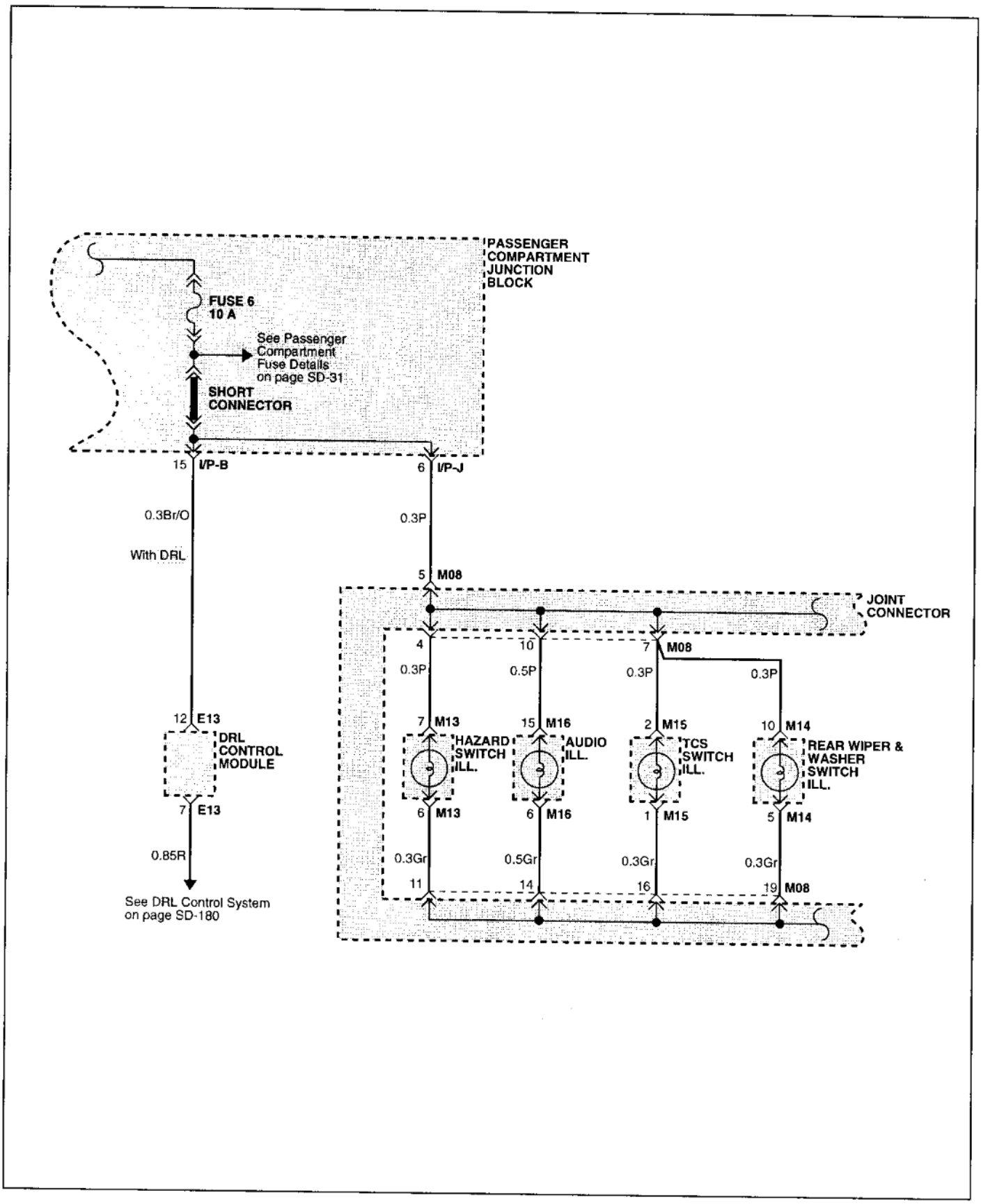
ILLUMINATIONS (1)



E2KB053A

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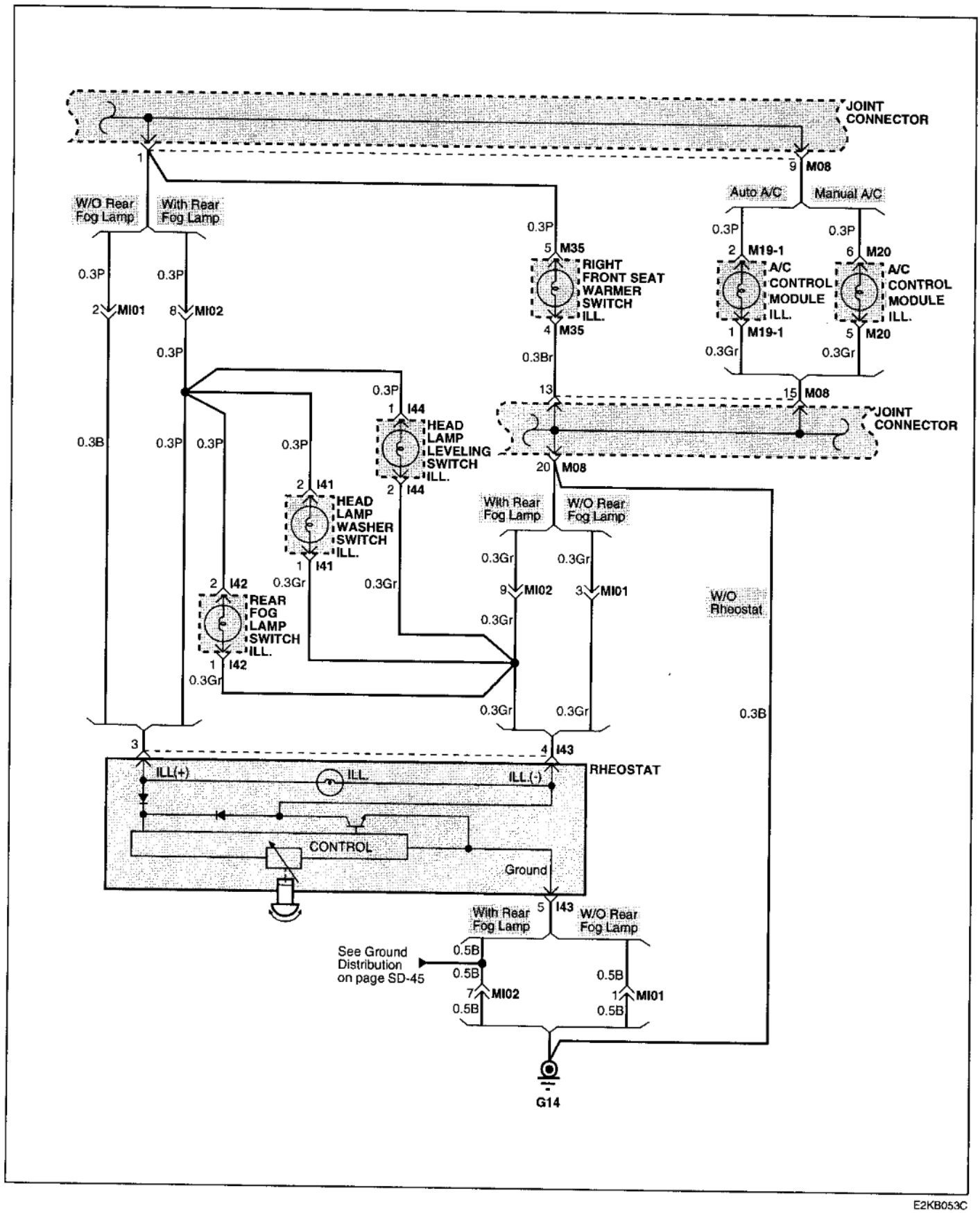
ILLUMINATIONS (2)



E2KB053B

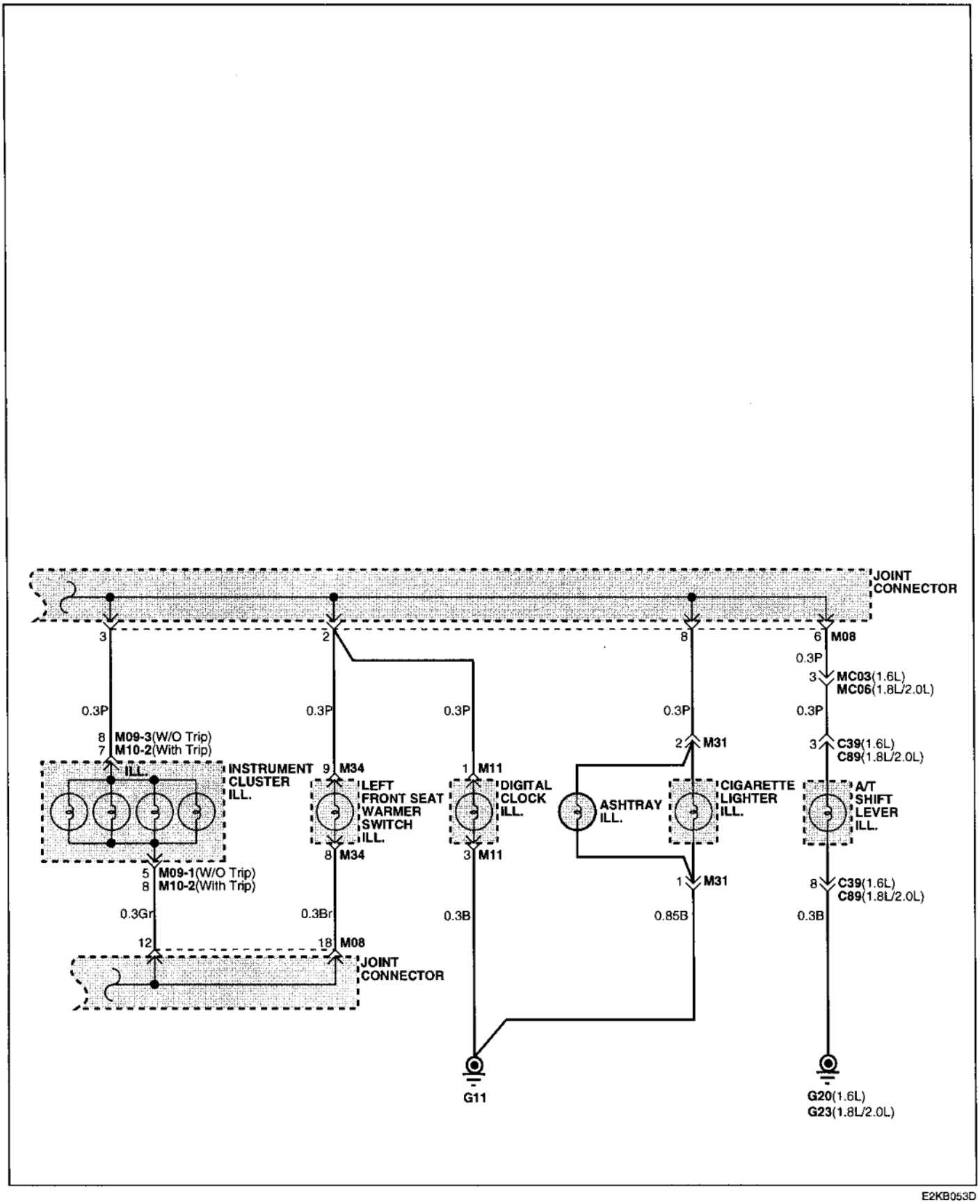
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ILLUMINATIONS (3)



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ILLUMINATIONS (4)



E2KB053D

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C39	A/T shift lever (1.6L)	CL-18
C89	A/T shift lever (1.8L/2.0L)	CL-21
D05	Power window main switch	CL-23
D15	Right front power window switch	CL-23
D25	Left rear power window switch	CL-23
D35	Right rear power window switch	CL-23
I04	Tail lamp relay	CL-14
I41	Head lamp washer switch	CL-15
I42	Rear fog lamp switch	CL-15
I43	Rheostat	CL-15
I44	Head lamp leveling switch	CL-15
M01–2	Multifunction switch	CL-2
M02	Glove box lamp	CL-2
M03–1	Glove box lamp switch (+)	CL-2
M03–2	Glove box lamp switch (-)	CL-2
M08	Joint connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–2	Instrument cluster (With Trip)	CL-3
M11	Digital clock	CL-3
M13	Hazard switch	CL-3
M14	Rear wiper & washer switch	CL-3
M15	TCS switch	CL-3
M16	Audio	CL-3
M19–1	A/C control module (Auto A/C)	CL-3
M20	A/C control module (Manual A/C)	CL-3
M25–1	ETACM	CL-3
M25–2	ETACM	CL-3
M26	TACM	CL-3
M31	Cigarette lighter	CL-4
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M45	Joint connector	CL-5

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COMPONENT LOCATION INDEX (2)

Connector	Location reference-page
I/P-A	CL-9
I/P-B	CL-9
I/P-D	CL-9
I/P-G	CL-9
I/P-H	CL-9
I/P-J	CL-9
MC03	CL-8
MC06	CL-8
MD01	CL-8
MD02	CL-8
MD03	CL-8
MD05	CL-8
MD06	CL-8
MI01	CL-8
MI02	CL-8
Grounds	
G01	CL-25
G03	CL-25
G11	CL-25
G14	CL-26
G20	CL-26
G23	CL-27

Circuit Description

Battery voltage is applied to the coil and contact of the tail lamp relay from fusible link BATT. With the light switch in PARK or HEAD, ground is provided to the tail lamp relay coil through the ETACM/ TACM. Battery voltage from fuse 6 and fuse 7 is then provided to the illumination lamps through the closed contact of the tail lamp relay.

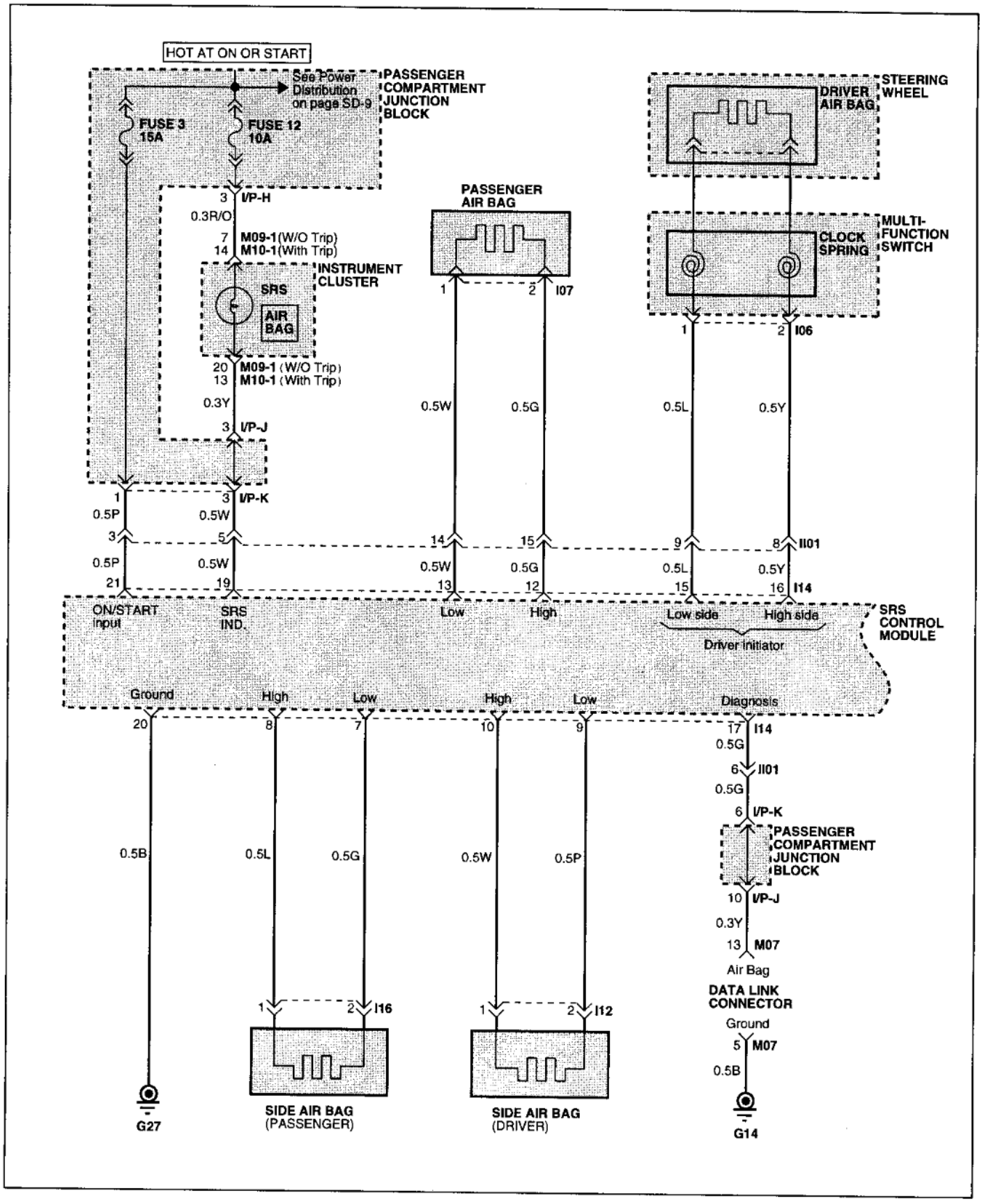
Ground is provided to the illumination lamps through the rheostat. The rheostat controls brightness of the illumination lamp's light.

Some of the illumination lamps can be turned on independently through the tail lamp relay in the DRL control module.

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AIR BAG SYSTEM (SRS) E2KB0540

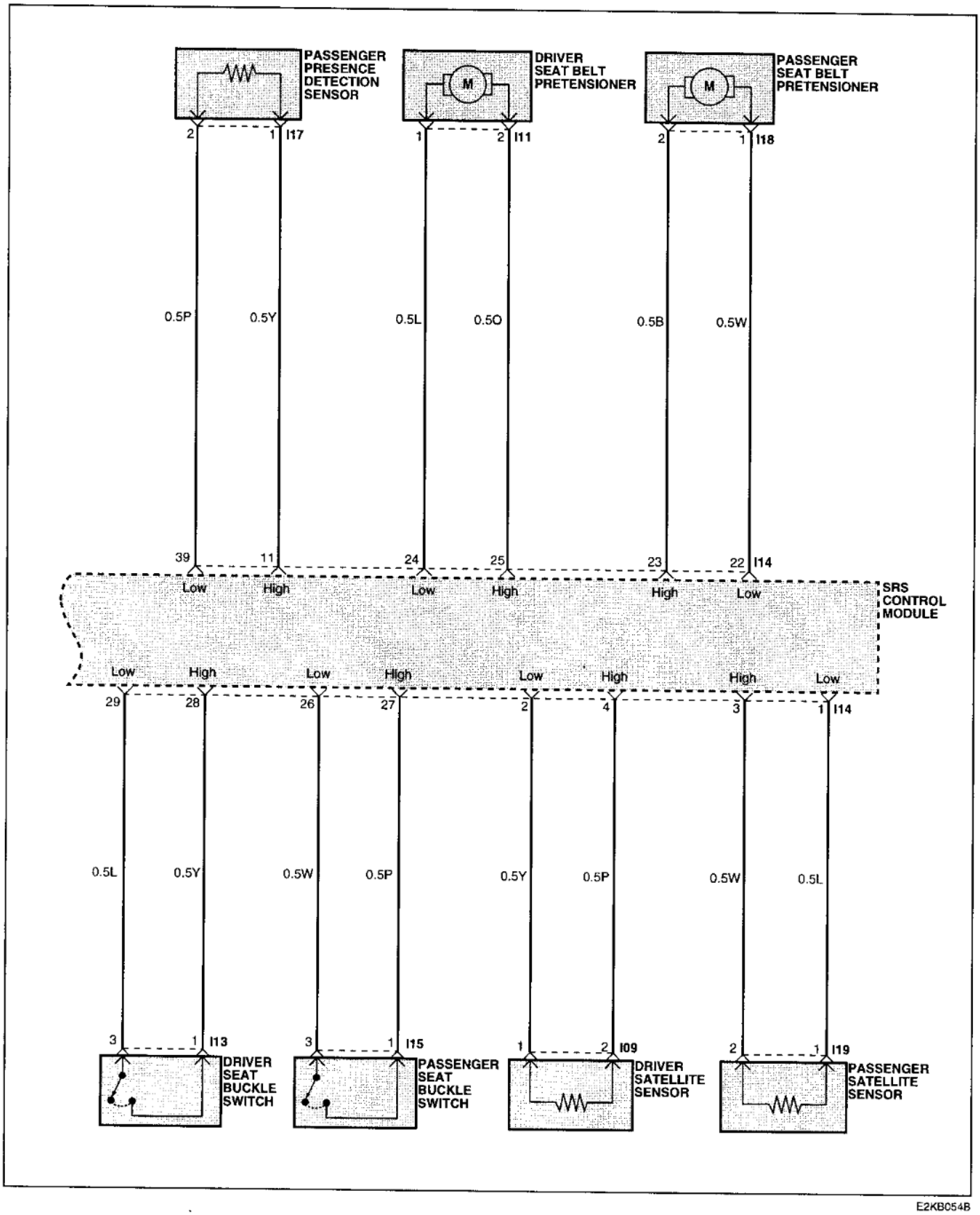
AIR BAG SYSTEM (SRS) (1)



E2KB054A

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AIR BAG SYSTEM (SRS) (2)



E2KB054B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
I06	Steering wheel (Contact coil)	CL-14
I07	Passenger air bag	CL-14
I09	Driver satellite sensor	CL-14
I11	Driver seat belt pretensioner	CL-14
I12	Side air bag (Driver)	CL-14
I13	Driver seat buckle switch	CL-14
I14	SRS control module	CL-14
I15	Passenger seat buckle switch	CL-14
I16	Side air bag (Passenger)	CL-14
I17	Passenger presence detection sensor	CL-14
I18	Passenger seat belt pretensioner	CL-14
I19	Passenger satellite sensor	CL-14
M07	Data link connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
Connectors		
II01		CL-15
I/P-H		CL-9
I/P-J		CL-9
I/P-K		CL-9
Grounds		
G14		CL-26
G27		CL-27

Circuit Description

Only authorized service personnel should do work on or around the Supplemental Restraint System (SRS) components. Service personnel should read the SRS section of the service manual carefully before starting work on the Supplemental Restraint System (SRS).
The Supplemental Restraint System (SRS) is a safety device, which, when used in conjunction with the seat belts, is designed to protect the driver and front seat passenger by deploying air bags when the car receives a frontal impact exceeding a certain set limit.

With the ignition switch in ON or START, battery voltage is applied to the SRS control module from fuse 3 and to the SRS indicator in the instrument cluster from fuse 12. When the ignition switch is turned to the ON position, the SRS indicator in the instrument cluster will flash six times. If the SRS indicator does not flash six times, stays on, or comes on while driving, the SRS is not working properly.

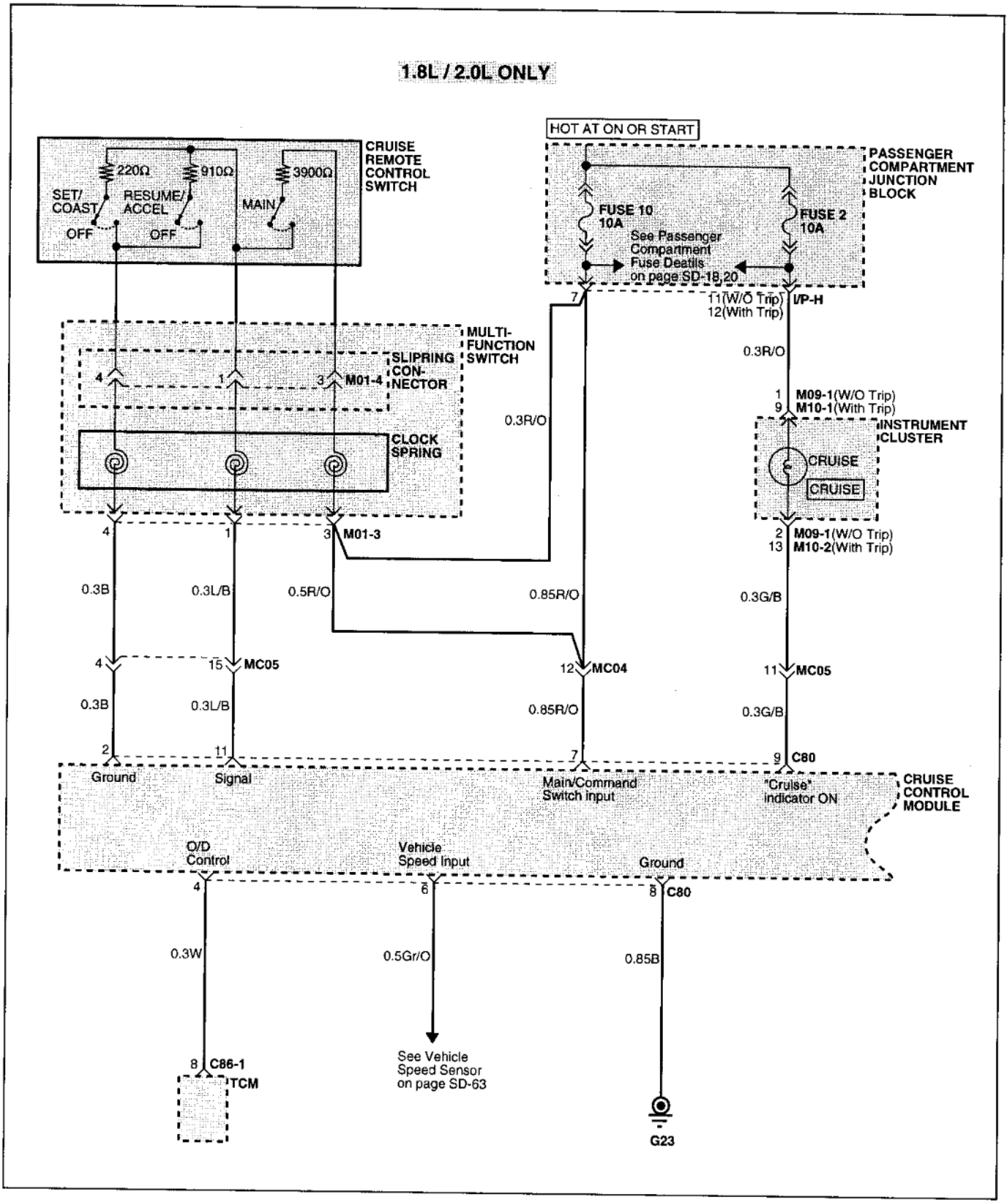
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CRUISE CONTROL SYSTEM E2KB0550

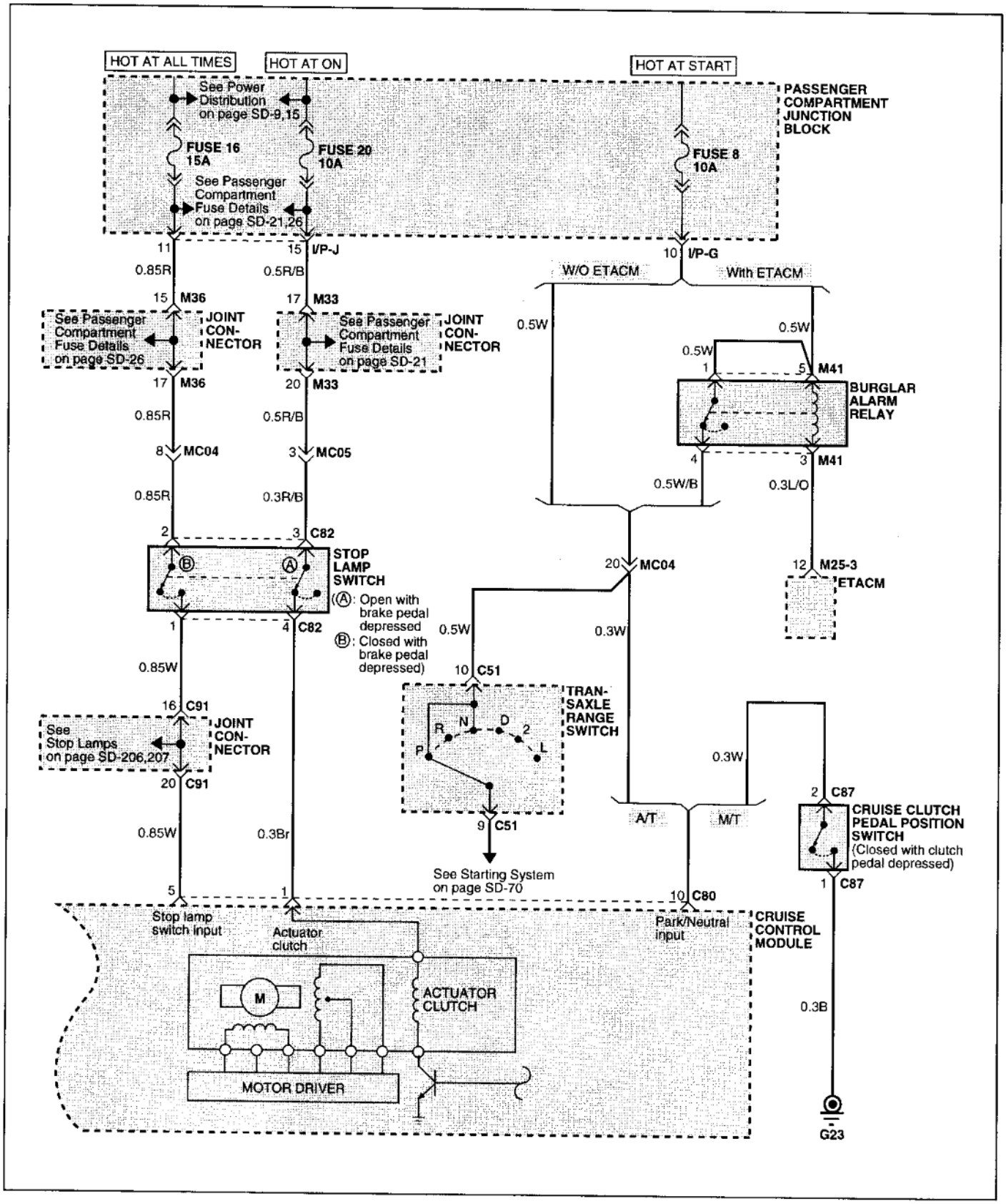
CRUISE CONTROL SYSTEM (1)



E2KB055A

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CRUISE CONTROL SYSTEM (2)



E2KB055B

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C51	Transaxle range switch	CL-18
C80	Cruise control module	CL-21
C82	Stop lamp switch	CL-21
C86–1	TCM	CL-21
C87	Cruise clutch pedal position switch (M/T)	CL-21
C91	Joint connector	CL-22
M01–3	Multifunction switch	CL-2
M01–4	Slipring connector	CL-2
M09–1	Instrument cluster (W/O Trip)	CL-2
M10–1	Instrument cluster (With Trip)	CL-3
M10–2	Instrument cluster (With Trip)	CL-3
M25–3	ETACM	CL-3
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M41	Burglar alarm relay	CL-5
Connectors		
I/P-G		CL-9
I/P-H		CL-9
I/P-J		CL-9
MC04		CL-8
MC05		CL-8
Ground		
G23		CL-27

Circuit Description

The cruise control system uses mechanical and electrical devices to maintain vehicle speed at a driver selected setting. The cruise control module receives signals from the cruise remote control switch, the stop lamp switch, transaxle range switch (A/T), cruise clutch pedal position switch (M/T) and the vehicle speed sensor. The cruise control module provides signals to the actuator in the cruise control module and the transaxle control module (A/T).

With cruise engaged, the cruise control module sends a signal to the transaxle control module that prevents the transaxle from continuously downshifting and upshifting to maintain the set vehicle speed. The cruise control module incorporates a self diagnostic feature.

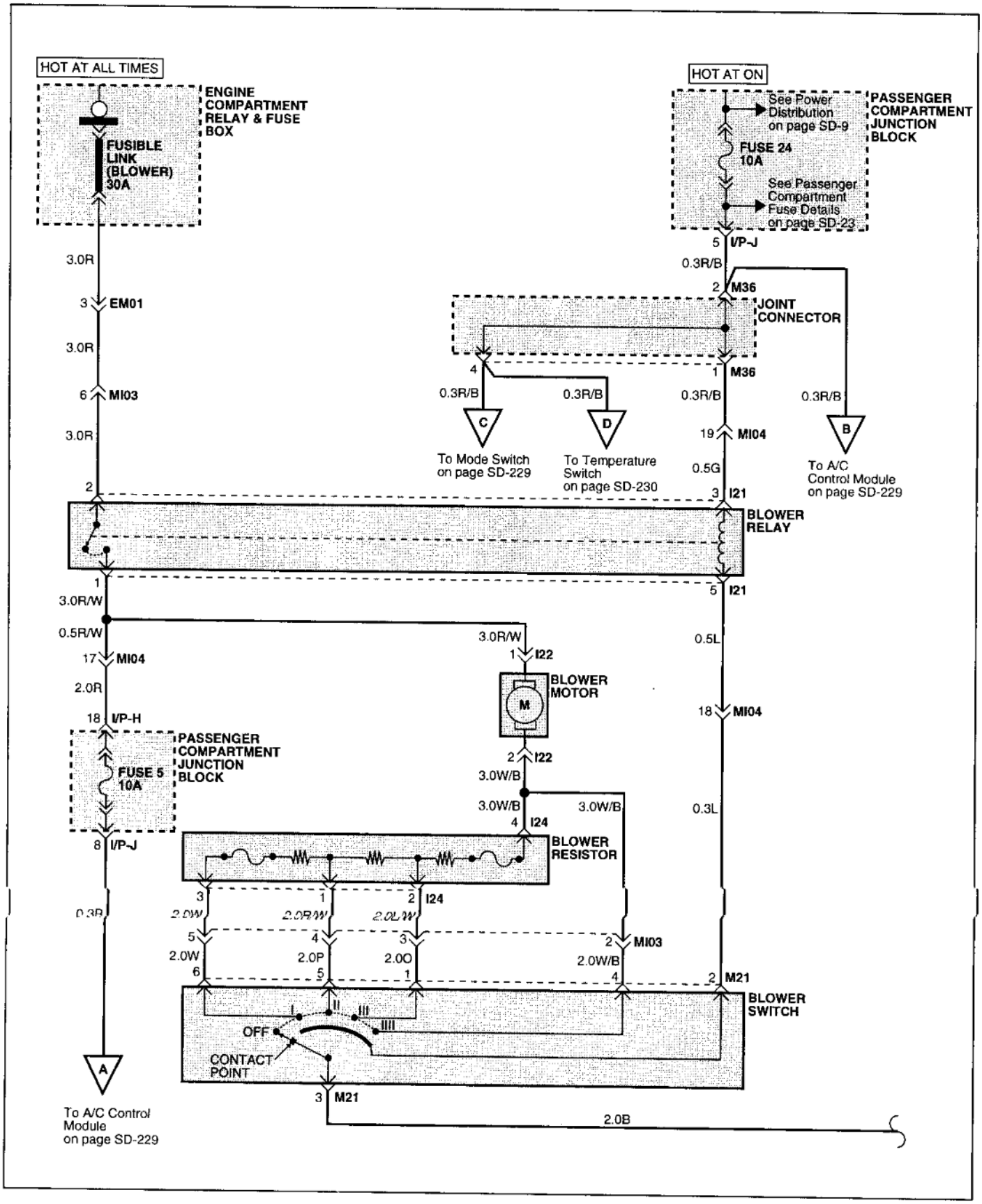
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BLOWER AND A/C CONTROLS (MANUAL) E2KB0560

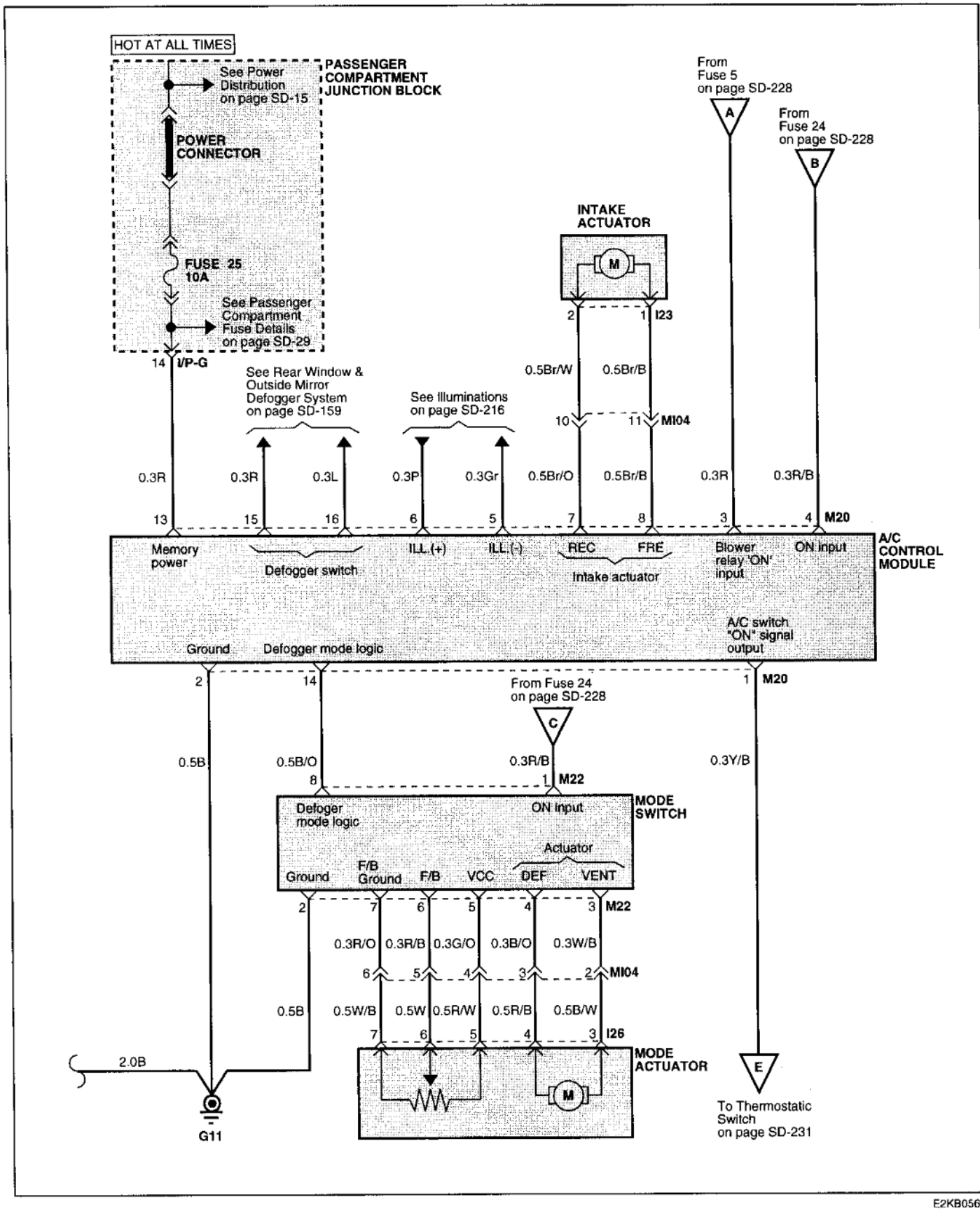
BLOWER AND A/C CONTROLS (MANUAL) (1)



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E2KB056A

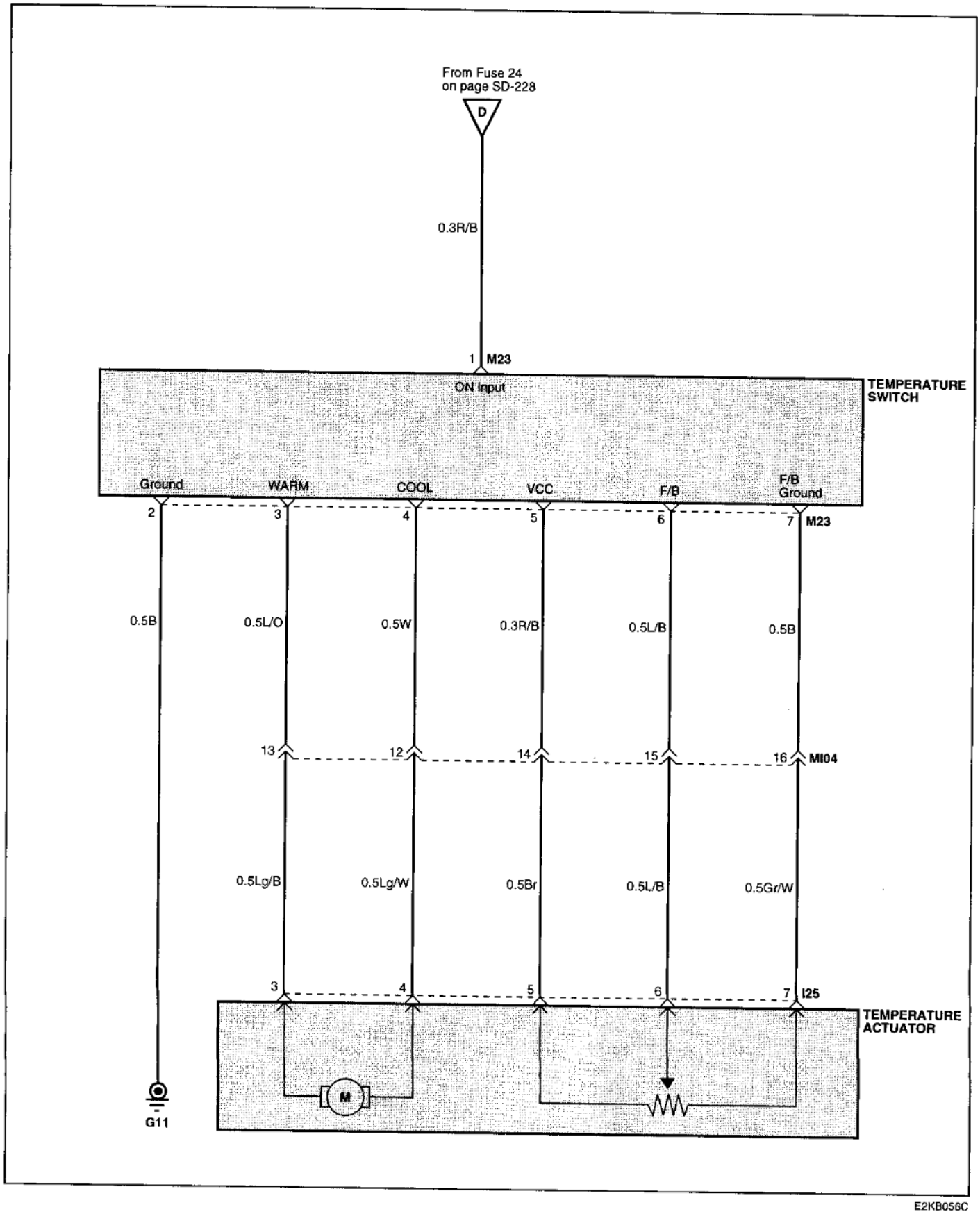
BLOWER AND A/C CONTROLS (MANUAL) (2)



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E2KB056B

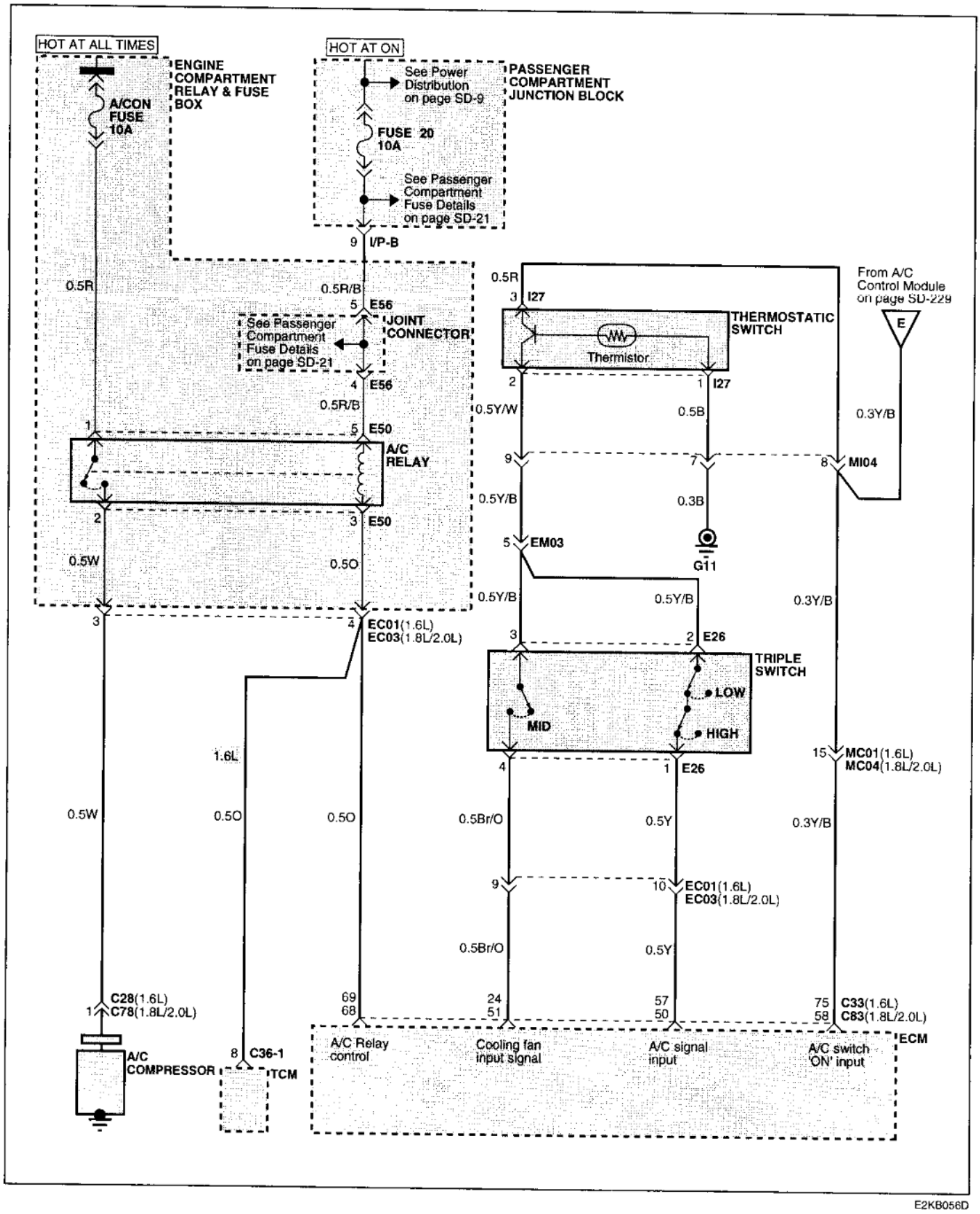
BLOWER AND A/C CONTROLS (MANUAL) (3)



E2KB056C

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BLOWER AND A/C CONTROLS (MANUAL) (4)



E2KB056D

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C28	A/C compressor (1.6L)	CL-18
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C78	A/C compressor (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
E26	Triple switch	CL-11
E50	A/C relay	CL-12
E56	Joint connector	CL-12
I21	Blower relay	CL-15
I22	Blower motor	CL-15
I23	Intake actuator	CL-15
I24	Blower resistor	CL-15
I25	Temperature actuator	CL-15
I26	Mode actuator	CL-15
I27	Thermostatic switch	CL-15
Connectors		
EC01		CL-13
EC03		CL-13
EM03		CL-13
MC01		CL-8
MC04		CL-8
MI03		CL-9
MI04		CL-9
Ground		
G11		CL-25

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Circuit Description

Blower control

With the ignition switch in ON and the blower switch in any position except OFF, the blower relay coil energizes and the blower relay contact closes. Battery voltage is then applied to the blower motor through the closed contacts of the blower relay and then ground is provided to the blower motor through the blower resistor and the blower switch.

As the blower switch is moved from OFF to HI, resistance of the resistors (built in to the blower resistor) will decrease and battery voltage applied to the blower motor will increase. This will increase the blower motor speed. When the blower switch is in HI, all of the resistors are bypassed and the maximum voltage is now applied to the blower motor so that it runs at the highest speed.

A/C control

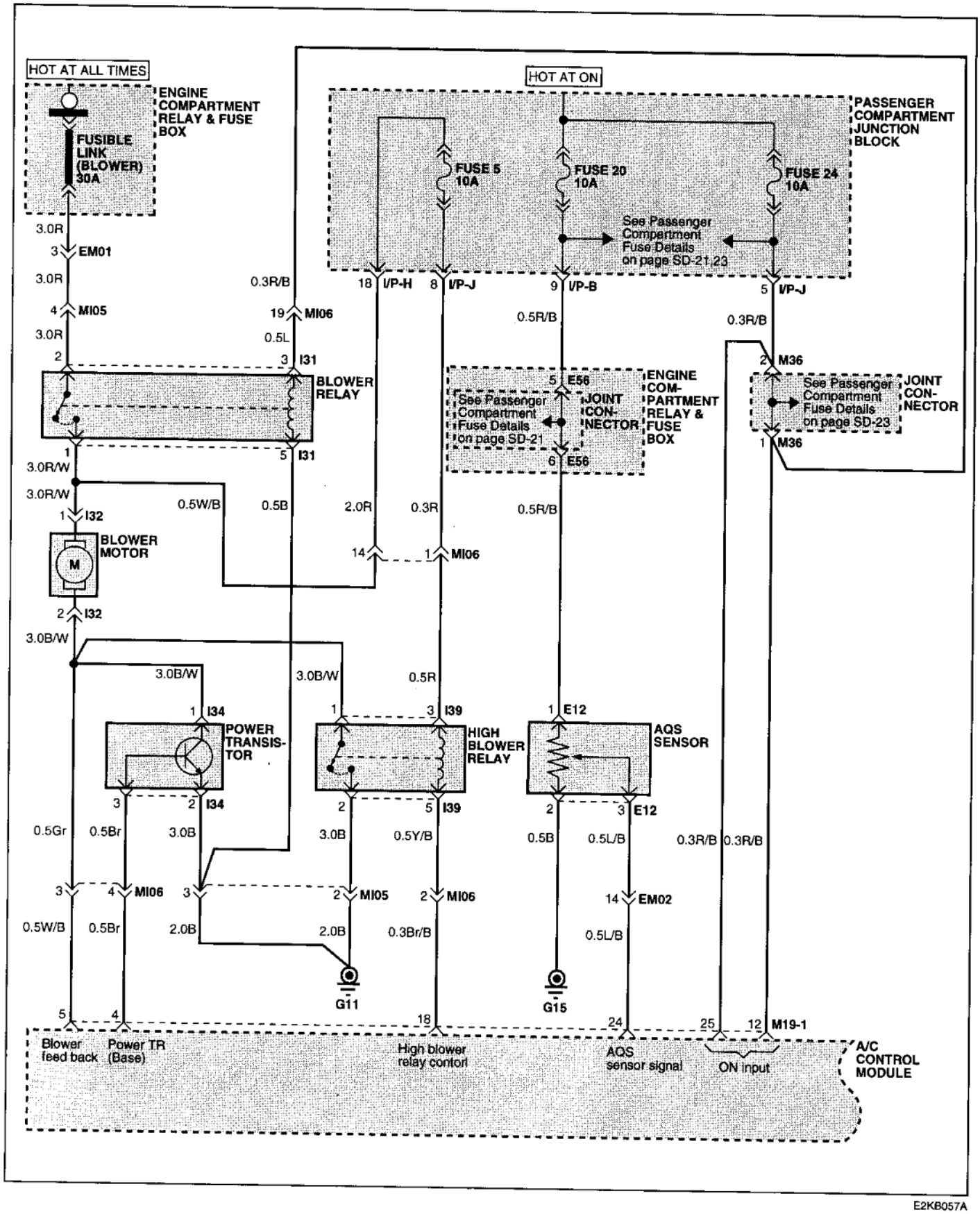
With the ignition switch in ON and the blower switch in any position except OFF, the blower relay coil energizes and battery voltage is applied to the A/C switch (installed on the A/C control module) through the closed contact of the blower relay and fuse 5. With the A/C switch in ON, the Engine Control Module (ECM) will ground the coil of the A/C control relay after a short delay to adjust idle speed. Battery voltage will then be applied to the compressor magnetic clutch from the A/C fuse through the closed contacts of the A/C relay. The A/C compressor runs.

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BLOWER AND A/C CONTROLS (AUTOMATIC) E2KB0570

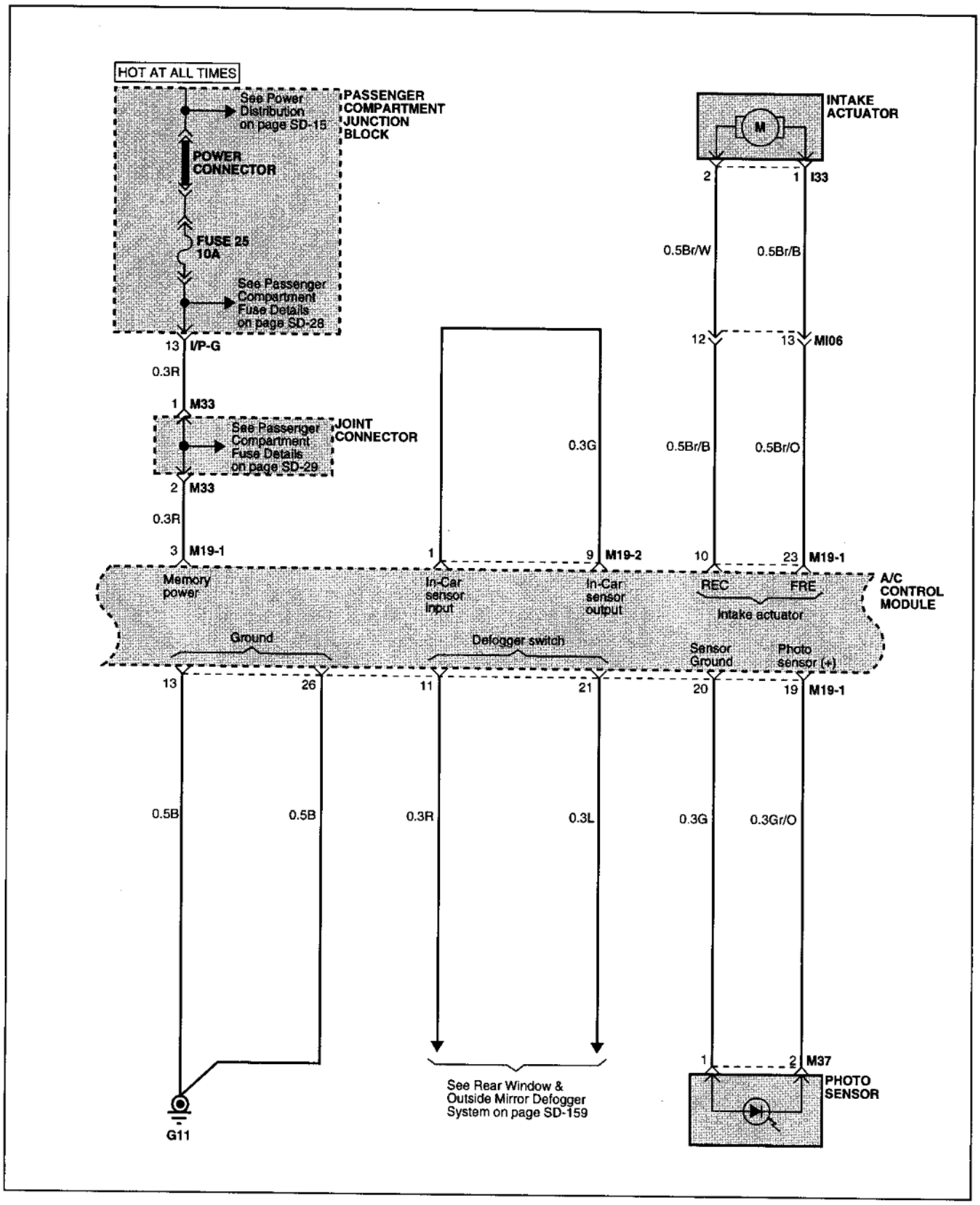
BLOWER AND A/C CONTROLS (AUTOMATIC) (1)



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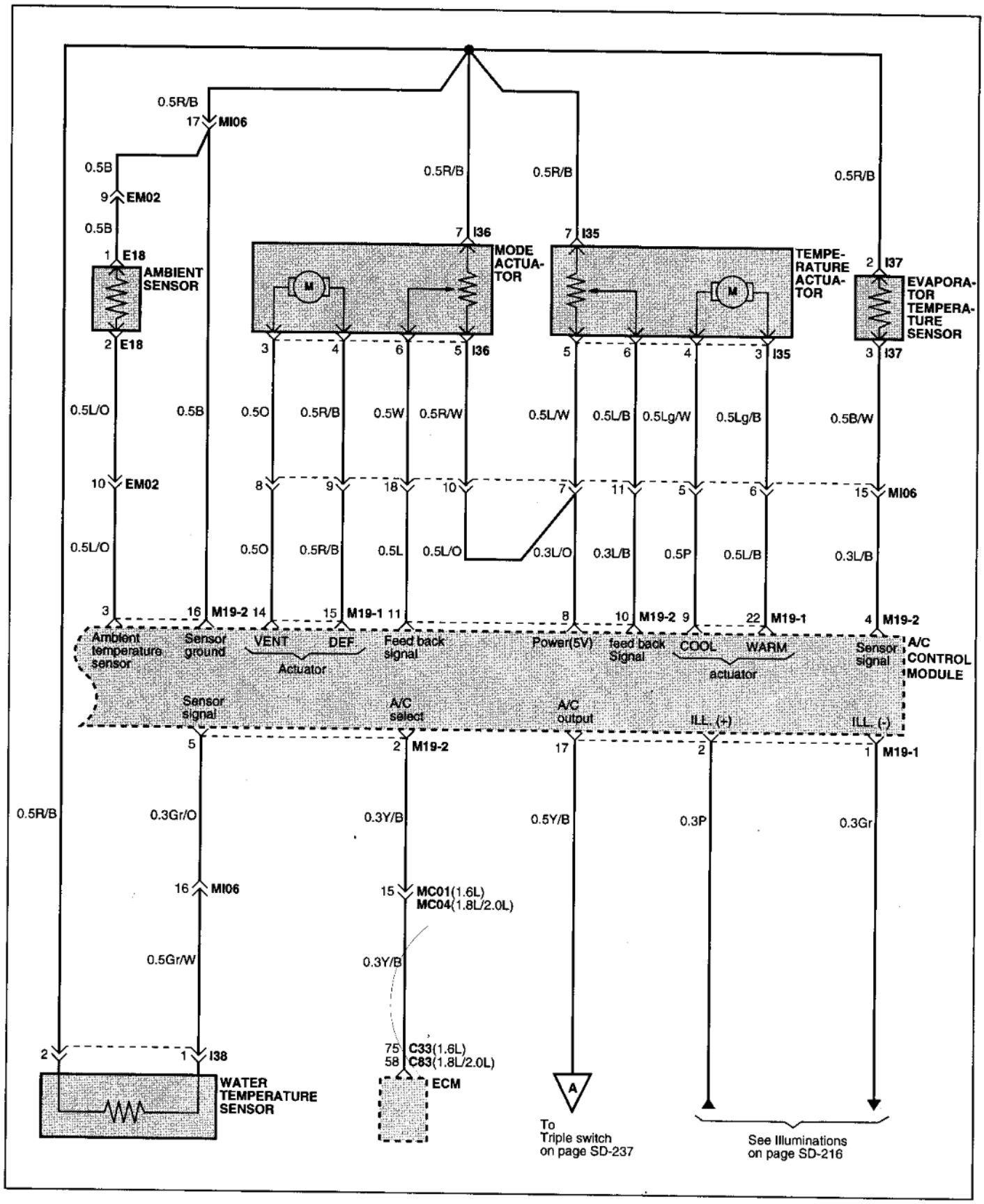
BLOWER AND A/C CONTROLS (AUTOMATIC) (2)



E2KB057B

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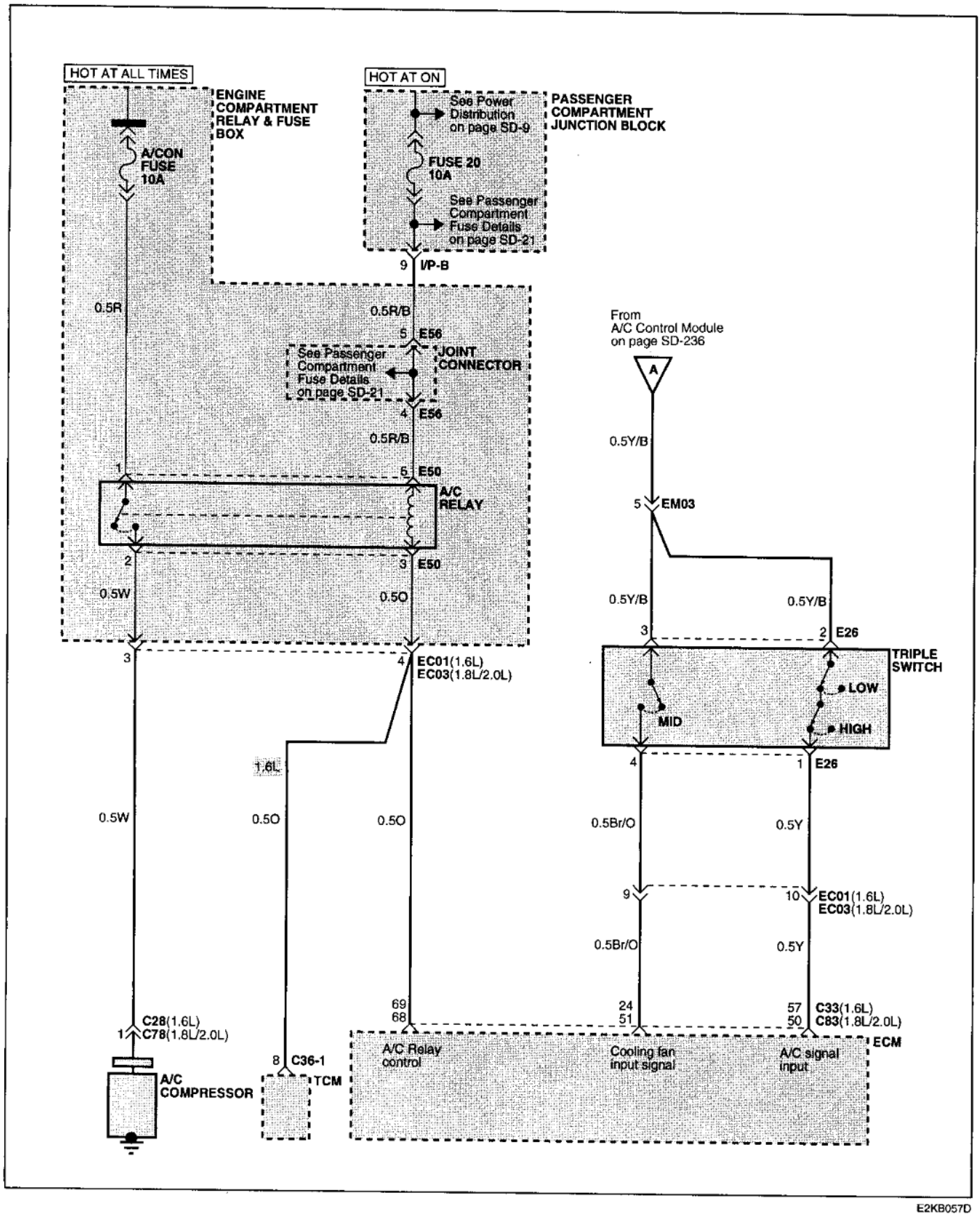
BLOWER AND A/C CONTROLS (AUTOMATIC) (3)



E2KB057C

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BLOWER AND A/C CONTROLS (AUTOMATIC) (4)



E2KB057D

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COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C28	A/C compressor (1.6L)	CL-18
C33	ECM (1.6L)	CL-18
C36–1	TCM (1.6L)	CL-18
C78	A/C compressor (1.8L/2.0L)	CL-21
C83	ECM (1.8L/2.0L)	CL-21
E12	AQS sensor	CL-10
E18	Ambient sensor	CL-11
E26	Triple switch	CL-11
E50	A/C relay	CL-12
E56	Joint connector	CL-12
I31	Blower relay	CL-15
I32	Blower motor	CL-15
I33	Intake actuator	CL-15
I34	Power transistor	CL-15
I35	Temperature actuator	CL-15
I36	Mode actuator	CL-15
I37	Evaporator temperature sensor	CL-15
I38	Water temperature sensor	CL-15
I39	High blower relay	CL-15
M19–1	A/C control module	CL-3
M19–2	A/C control module	CL-3
M33	Joint connector	CL-4
M36	Joint connector	CL-4
M37	Photo sensor	CL-4
Connectors		
EC01		CL-13
EC03		CL-13
EM02		CL-13
EM03		CL-13
MC01		CL-8
MC04		CL-8
MI05		CL-9
MI06		CL-9
Grounds		
G11		CL-25
G15		CL-26

Circuit Description

The A/C control module receives inputs from the A/C sensor (for instance, photo sensor, AQS sensor, defogger switch, evaporator temperature sensor, water temperature sensor, ambient sensor, etc) and controls the function of air conditioning system. The A/C control module and various sensors provide accurate control of air mixture using the mode actuator, the temperature actuator and the intake actuator under all operating conditions.

The blower motor runs at the highest speed when the high blower relay coil is energized through the A/C control module.

The function of the power transistor is that of the blower resister in manual A/C. The power transistor is controlled by the input currents that are applied to the power transistor BASE terminal.

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